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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
and is
                        score greater
derived by analysis of the total score distribution
                   is the number of results predicted by chance to have a ater than or equal to the score of the result being printed,
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2391
1 MTELPAPLSYFQNAQMSEDN.....ATDYLVQPFMDQLAFHQFYI 467
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Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                            /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
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/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
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/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
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No.	Score	Match	Match Length DB	Ŵ	ID	Description
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ALIGNMENTS

APPLICATION FILING DATE: 30-AUG-1996 CLASSIFICATION 536 PRIOR APPLICATION DATA: APPLICATION NUMBER: 60/03,054 FILING DATE: 31-AUG-1995 ATTORNEY/AGENT INFORMATION: NAME: KIN, UUDITH U. REGISTRATION NUMBER: 40,679 REFERENCE/DOCKET NUMBER: 0609.4? TELECHMUNICATION INFORMATION: TELECHMUNICATION INFORMATION: TELEPAX: 202-371-2540 INFORMATION FOR SEQ ID NO: 30: SEQUENCE CHARACTERISTICS: LENGTH: 467 amino acids TYPE: amino acids TOPOLOGY: linear NOLECULE TYPE: protein US-08-706-344C-30 RESULT 1 US-08-706-344C-30 Sequence 30, Appli Patent No. 6248555 Query Match 100.0%; Score 2391; DB 3; Length 467; Best Local Similarity 100.0%; Pred. No. 1.1e-234; Matches 467; Conservative 0; Mismatches 0; Indels 0 ZIP: 20005-3934 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Ve CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/706,344C GENERAL INFORMATION: TITLE OF INVENTION: Genetic Alterations Related To Familial TITLE OF INVENTION: Alzheimer's Disease NUMBER OF SEQUENCES: 32 CORRESPONDENCE ADDRESS: APPLICANT: TANZI, RUDOLPH APPLICANT: WASCO, WILMA ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C STREET: 1100 NEW YORK AVENUE, SUITE 600 CITY: WASHINGTON COUNTRY: RY: USA 20005-3934 ğ Application US/08706344C IUMBER: US/08/706,344C 30-AUG-1996 N, ED 0609.4180001 Version #1.30 (EPO) 0 Gaps

Result

Query

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Sequence 2, Application US/08706344C Patent No. 6248555
                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/003,054
FILING DATE: 31-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: KIM, JUDITH U
REGISTRATION NUMBER: 0609.41
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                                 ZIP: 20005-3934

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version

CURRENT APPLICATION DATA:

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: TANZI, RUDOLPH
APPLICANT: WASCO, WILMA
TITLE OF INVENTION: Genetic Alterations Related To FI
TITLE OF INVENTION: Alzheimer's Disease
NUMBER OF SEQUENCES: 32
CORRESPONDENCE ADDRESS:
ADDRESSE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.(
STREET: 1100 NEW YORK AVENUE, SUITE 600
                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/706,344C FILING DATE: 30-AUG-1996 CLASSIFICATION: 536
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US-08-706-344C-32
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 32, Application US/08706344C Patent No. 6248555
GENERAL INFORMATION:
APPLICANT: TANZI, RUDOLPH
APPLICANT: WASCO, WILMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 466; Conserv
                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/706,344
FILLING DATE: 30-AUG-1996
                                                                                                                                                                                                                                                                                                 ZIP: 20005-3934
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                         CLASSIFICATION: 536
PRIOR APPLICATION UMBER: 60/003,054
FILING DATE: 31-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: KIM, JUDITH U.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Genetic Alterations Related
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
ZIP: 20005-3934
                         REFERENCE/DOCKET NUMBER: 06
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Conservative
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Pred. No. 5.5e-234;
0; Mismatches 1;
                                                                                                                                                                                                                                            Version
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RESULT 2 US-08-706-344C-2

GENERAL INFORMATION:

WASHINGTON

USA

TYPE: amino acid TOPOLOGY: linear

TYPE:

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RESULT 4
US-08-967-101-134
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; MOLECULE TYPE:
US-08-706-344C-32
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TELEPAX: 202-371-2540
INFORMATION FOR SEQ ID NO: 32
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                         Patent No.
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Best Local
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Ralease #1.0, ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/967,101
FILING DATE: 10-NOV-1997
                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                   APPLICANT: ST. GEORGE-HYSLOP, PETER H
APPLICANT: ROMMENS, JOHANNA M
APPLICANT: FRASER, PAUL B
TITLE OF INVENTION: GENETIC SEQUENCES AND PROTEINS
TITLE OF INVENTION: TO ALZHEIMER'S DISEASE
NUMBER OF SEQUENCES: 183
                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                    COUNTRY: U.
ZIP: 02110
                                                                                                                                                                                      CITY:
                                                                                                                                                                                                                     ADDRESSEE:
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High Street Tower
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Pred. No. 1.8e-233;
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                         Sequence 134, APP---
Sequence 134, APP---
Sequence 134, APP---
Patent No. 5286054

Patent No. 5286054

Patent No. 5286054

Patent No. 5286054

PAPLICANT: ST. GEORGE-HYSLOP, PETER H

APPLICANT: ROMMENS, JOHANNA M

AUGUSTON TO ALZHEIMER'S DISEASE

CORRESPONDENCE ADDRESS:
ADDRESSEE: TESTA, HURWITZ & THIBEAULT

ADDRESSEE: TESTA, HURWITZ & THIBEAULT
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Best Local Similarity
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:
 COUNTRY: UZIP: 02110
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                Massachusetts
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FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Pitcher, Edmund R.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7000
TELEPEAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 134:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 467 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
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TLLLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI
                                    TLLLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI 467
                                                                                                                                                                                             GDPEAQRRVSKNSKYNAESTERESODTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
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Pred. No. 2.2e-233;
1; Mismatches 1;
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Patent No. 600<u>1</u>794

GENERAL INFORMATION:

APPLICANT: Creasy, Caretha

APPLICANT: Livi, George

APPLICANT: Karran, Eric

APPLICANT: Clinkenbeard, Helen

APPLICANT: Southan, Christopher

TITLE OF INVENTION: HUMAN SERIME PROTEASE
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                                                                                                                                                                US-08-923-454A-10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (617) 248-7000
TELEPAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 134:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acide
TYPE: amino acide
STRANDEDNESS: Single
                                                                                                                                Sequence 10, Application US/08923454A Patent No. 6004794
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Best Local
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NAME: Pitcher, Edmund R.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDLUM TYPE: Floppy disk
COMPUTER: EM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION NUMBER: US/08/592,541
APPLICATION NUMBER: US/08/592,541
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Local Similarity 99.6%;
nes 465; Conservative
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linear
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Pred. No. 2.2e-233;
1; Mismatches 1;
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US-08-923-454A-10
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Best Local S
Matches 465
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PILING DATE: 06-0527-1996
ATTORNEY_AGENT INFORMATION:
NAME: Baumeister, Kirk
REGISTRATION NUMBER: 33,833
REFERENCE/DOCKET NUMBER: 950547
TELECOMMUNICATION INFORMATION:
TELESHONE: 610-270-5096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
WOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEX:
INFORMATION FOR SEQ ID NO:
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ADDRESSEE: SmithKline B
STREET: 709 Swedeland R
CITY: King of Prussia
STATE: PA
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LENGTH: 467 amino acids
TYPE: amino acid
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COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ Version 1.5
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
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Local Similarity 99.6%;
les 465; Conservative
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VQELSSSILAGEDPEERGVKLGLGDF1FYSVLVGKASATASGDWNTT1ACFVAIL1GLCL
                                   VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL 420
                                                                                                                  GDPEAQRRVSKNSKHNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
                                                                                                                                                              LPEWTAWLILAVISVYDLVAVLCPKGPLRMLVETAQERNETLFPALIYSSTMVWLVNMAE
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                                                                                 GDPEAQRRVSKNSKYNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
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Pred. No. 2.2e-233;
1; Mismatches 1;
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US-08-670-964-2

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TOPOLOGY: 1in
MOLECULE TYPE:
US-08-670-964-2
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GENERAL INFORMATION:
APPLICANT: Hardy
                                                                                                                                                                                                                                                                                                                                                                  Query Match 99.5%; Score 2378; DB 3; Length 467; Best Local Similarity 99.6%; Pred. No. 2.2e-233; Matches 465; Conservative 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/670,96/
FILING DATE: 26-JUN-1996
CLASSIFICATION: 43
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/001,142
FILING DATE: 13-JUL-1995
APPLICATION NUMBER: 60/001,501
FILING DATE: 18-JUL-1995
ATTORNEY/AGENT INFORMATION:
NAME: HAI, William T
REGISTRATION NUMBER: 34,344
REFERENCE/DOCKET NUMBER: 950358
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FRANCSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Diskett
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CITY: Philadelphia
STATE: PA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: SmithKline Beecham Corporation STREET: 709 Swedeland Road - UW2220; P.O. Box 15
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                                                                                              YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY 240
                                                                                                                                       DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFFSFI 180
                                                                                                                                                         DTETVGGRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFSFI
                                                                                                                                                                                                                QVVEQDEBEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE
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EARLY ONSET ALZHEIMER'S DISEASE
GENE AND GENE PRODUCTS
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RESULT 8
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Patent No. 6020143
                                                                                                                                                                                                 Query Match 99.5%;
Best Local Similarity 99.6%;
Matches 465; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
COUNTRY: USA
COUNTRY: USA
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: ASCII

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/888,077A
FILING DATE: 03-JUL-1997
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/592,541
APLICATION NUMBER: US 08/592,541
APLICATION NUMBER: US 08/592,541
APLICATION NUMBER: US 08/592,541
APLICATION NUMBER: SCHERING 3
REGISTRATION NUMBER: 36,629
REGISTRATION NUMBER: SCHERING 3
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (908) 654-7866
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: ST. GEORGE-HYSLOP, PETER H
APPLICANT: ROMMENS, JOHANNA M
APPLICANT: FRASER, PAUL E
TITLE OF INVENTION: GENETIC SEQUENCES AND PROTEINS
TITLE OF INVENTION: TO ALZHEIMER'S DISEASE AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK
STREET: 600 SCUTH AVENUE WEST
CITY: WESTFIELD
                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
TOPOLOGY: linear
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DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLEFFSFI 180
                                                                QVVEQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE 120
                                        QVVEQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE
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                                                                                                                                                                                                 Score 2378; DB 3;
Pred. No. 2.2e-233;
1; Mismatches 1;
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US-09-124-698-134
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                                                                                            ; TOPOLOGY: linear; MOLECULE TYPE: protein US-09-124-698-134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No. 6117978
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 134, Application US/09124698 Patent No. 6117978
                               Query Match
Best Local Similarity
Matches 465; Conserv
                                                                                                                                                                                    TELEPHONE: (617) 248-7000
TELEPAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 134:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/124,698
                                                                                                                                                                                                                                NAME: Pitcher, Edmund R. TELECOMMUNICATION INFORMATION: (617) 248-7000
                                                                                                                                                                                                                                                                              FILING DATE: ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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APPLICANT: ROMMENS, JOHANNA M
APPLICANT: FRASER, PAUL E
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: High
CITY: Boston
                                                                                                                                     STRANDEDNESS:
                                                                                                                                                      TYPE: amino acid
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                                                                                                                                                                     ENGTH:
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   MTELPAPLSYFQNAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR
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High Street Tower - 125 High Street
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                                 Conservative
                                                                                                                                     single
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                                              99.5%;
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                               Score 2378; DB 3;
Pred. No. 2.2e-233;
l; Mismatches 1;
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RESULT 10
US-09-127-480-134
                                     NAME: Pitcher, Edmund R.
TELECHOMUNICATION: INFORMATION:
TELEPHONE: (617) 248-7000
TELEPAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 134:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
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Patent No. 6194153
                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/127,480
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                                                                                                                                                                                                                               CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                     FILING DATE:
ATTORNEY/AGENT INFORMATION:
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ADDRESSEE: TESTA, HU
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CITY: Boston
TYPE: amino acid
STRANDEDNESS: sir
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High Street Tower - 125 High Street
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FRASER, PAUL E
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RESULT 11
US-08-496-841C-134
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GENERAL INFORMATION:
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Best Local
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Vers
CURRENT APPLICATION NUMBER: US/08/496,841C
FILING DATE: 28-7un-1995
CLASSIFICATION: «Unknown»
ATTORNEY/AGENT INFORMATION:
NAME: PAUL F. Pehlner, Ph.D.
REGISTRATION NUMBER: 35,135
TELECOMMUNICATION NUMBER: 35,135
TELECOMMUNICATION NUMBER: 35,700
TELEFAX: (212) 527-7700
TELEFAX: (212) 753-6237
                                                                                                                                                                                                                                                                                                                                                   TO ALZHEIMER'S DISBASE
NUMBER OF SEQUENCES: 175
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: Darby & Darby,
STREET: 805 Third Avenue
                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Flopp
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Pred. No. 2.2e-233;
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MTELPAPLSYFQNAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR

Query Match Best Local S Matches 465

Local Similarity les 465; Conser

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99.5%;

Score 2378; DB 4; Pred. No. 2.2e-233; 1; Mismatches 1;

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TITLE OF INVENTION: DAM MOLECULES COMPRISING A PROMOTER CAPABLE OF TITLE OF INVENTION: CONFERRING EXPRESSION OF A HETEROLOGOUS DNA SEQUENCE TITLE OF INVENTION: ALL NEURAL CELLS AT ALL STAGES OF DEVELOPMENT IN C. TITLE OF INVENTION: ELEGANS AND USES THEREOF FILE REFERENCE: 674503-2004
CURRENT APPLICATION NUMBER: US/08/832,867C
CURRENT EILING DATE: 1997-04-04
NUMBER OF SEQ ID NOS: 8
SEQ ID NO 3
SEQ ID NOS: 8
SEQ ID NO 3
SEQ ID NO 3
SEQ ID NO 3
SEQ ID NOS: 8

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US-08-832-867-3
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APPLICANT: BAUMEISTER, Ralf
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Patent No. 6376239
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MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO (134)
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SEQUENCE CHARACTERISTICS:
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TYPE: amino acid
STRANDEDNESS: single
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Pred. No. 2.2e-233;
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360 300 300

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i LENGTH: 467
; TYPE: PRT
; ORGANISM: Homo Sapien
US-09-227-725A-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: St. George-Hyslop, Peter H.
APPLICANT: St. George-Hyslop, Peter H.
APPLICANT: Rommens, Johanna
APPLICANT: Fraser, Paul E.
TITLE OF INVENTION: Alzheimer's Related Proteins and Methods
TITLE OF INVENTION: of Use
FILE REFERENCE: 1034/1F910-US1
CURRENT APPLICATION NUMBER: US/09/227,725A
CURRENT APPLICATION NUMBER: US/09/227,725A
CURRENT FILING DATE: 1999-01-08
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO. 1
                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 465
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                                                                                                                                                                                                                                                                                                                    / Match 99.5%;
Local Similarity 99.6%;
nes 465; Conservative
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                         YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY
                                                                        DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFSFI
                                                                                                  DTETVGGRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFSFI
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YLGEVFKTYNVAVDYITVALLIMNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY
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PARENT INFORMATION:
GENERAL INFORMATION:
APPLICANT: ST. GEORGE-HYSLOP, PETER H
APPLICANT: ST. GEORGE-HYSLOP, PETER H
APPLICANT: ROWNENS, JOHANNA M
APPLICANT: FRASER, PAUL E
TITLE OF INVENTION: TO ALZHEIMER'S DISEASE
TITLE OF INVENTION: TO ALZHEIMER'S DISEASE
NUMBER OF SEQUENCES: 183
CORRESPONDENCE ADDRESSE: TESTA, HURWITZ & THIBEAULT
ADDRESSEE: TESTA, HURWITZ & THIBEAULT
STREET: High Street Tower - 125 High Street
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; MOLECULE TYPE: 
US-09-124-523-134
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US-09-124-523-134
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ATTORNEY/AGENT INFORMATION:
NAME: Pitcher, Edmund R.
PIELECONMUNICATION INFORMATION:
TELEPHONE: (617) 248-7000
TELEPAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 134:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
                                                                                                                                                            Query Match
Best Local S
Matches 465
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: PLOSPY disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/124,523
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION NUMBER: US/08/592,541
APPLICATION NUMBER: US/08/592,541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Boston
STATE: Massacl
COUNTRY: U.S.
ZIP: 02110
                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                               TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
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                         QVVEQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE 120
                                                                                                          MTELPAPLSYFQNAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR
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  QVVEQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE
                                                                               MTELPAPLSYFONAOMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR 60
                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                          protein
                                                                                                                                                                             99.5%;
                                                                                                                                                          Score 2378; DB 4;
Pred. No. 2.2e-233;
1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1
                                                                                                                                                                                                  Length 467;
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INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
STRANDEDNESS: «Unknown»
TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-375-318-3
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US-09-375-318-3
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Patent No. 6468791
GENERAL INFORMATION:
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDILM TYBE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/375,318
FILING DATE: 16-Aug-1999
CLASSIFICATION: <UNknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                           NAME: Verna, James M.
REGISTRATION NUMBER: 33,287
REFERENCE/DOCKET NUMBER: 920010.571C1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (26) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Levy-Lahad, Ephrat
Bird, Thomas D.
Galas, David J.
TITLE OF INVENTION: CHROMOSOME 1 GENE AND GENE PRODUCTS RELATED TO
ALZHEIMER'S DISEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Tanzi, Rudolph E.
Schellenberg, Gerard D.
Wasco, Wilma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BEERY LLP
STREET: 701 Fifth Ave, Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 88
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STATE: Washington
COUNTRY: USA
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  99.5%;
  Score 2378; DB 4; Length 467; Pred. No. 2.2e-233;
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Matches	465; Conservative 1; Mismatches 1; Indels 0; Gaps
γQ	1 MTELPAPLSYFQNAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR 60
Db	1 MTELFAPLSYFONAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR 60
Ş	61 QVVBQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE 120
DЬ	61 QVVEQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE 120
8	121 DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAMLIISSLLLLFFFSFI 180
рь	121 DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFEFSFI 180
γQ	181 YLGEVFKTYNVAVDYITVALLIMNFGVVGMISIHMKGPLRLQQAYLIMISALMALVPIKY 240
Ф	181 YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY 240
Qγ	241 LPEWTAWLILAVISVYDLVAVLCLKGPLRMLVETAQERNETLFPALIYSSTMVWLVNYAE 300
Ъ	241 LPEWTAWLILAVISVYDLVAVLCEKGPLRWLVETAQERNETLFPALIYSSTMVWLVNMAE 300
\$	301 GDPEAQRRVSKNSKHNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA 360
Вb	301 GDPEAQRRVSKNSKYNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA 360
₽.	361 VQELSSSILAGEDPEERGVKLGLGDPIFYSVLVGKASATASGDWNTTIACFVAILIGLCL 420
ф	361 VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL 420
γQ	421 TILLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI 467
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Job time : 35 secs

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Minimum
Maximum
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Maximum Match 100%
Listing first 45 summaries
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  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
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2391
1 MTELPAPLSYFQNAQ
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                                                  MTELPAPLSYFQNAQMSEDN....
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101	101	101	101.5	101.5	102	102.5	103	103.5	104	104.5	104.5	105	105.5	106	107.5
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553	500	585	780	476	1635	470	846	477	505	721	486	873	682	578	488
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D98026	S12899	AE1747	H64830	H89773	T32452	T49272	T04970	D84306	G90419	AH3417	H75060	C90594	T43292	D87374	S46118
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ALIGNMENTS

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presentlin 1, splice form 467 - human
presentlin 1, splice form 467 - human
NALternate names: Alzheimer's disease protein 3; protein S182
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 29-Jan-1998 #sequence revision 13-Feb-1998 #text_change 29-Sep-1999
C;Date: 29-Jan-1998 #sequence revision 15-Feb-1998 #sequence 29-Sep-1999
C;Date: 29-Jan-1998 #sequence revision 15-Feb-1998 #sequence 29-Sep-1999
C;Date: 29-Jan-1998 #sequence revision 15-Feb-1998 #sequence 29-Sep-1999
C;Date: 29-Jan-1998 #sequence 29-Sep-1999
C;Date: 29-Jan-1999
C;Date: 29-Ja
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() Superfamily: presentlin

() Superfamily: presentlin

() Keywords: alternative splicing; Alzheimer's disease; glycoprotein; transmembrane protein; 82-100/Domain: transmembrane #status predicted <TM1>
() 82-100/Domain: transmembrane #status predicted <TM2>
() 164-185/Domain: transmembrane #status predicted <TM3>
() 195-213/Domain: transmembrane #status predicted <TM5>
() 212-38/Domain: transmembrane #status predicted <TM5>
() 212-38/Domain: transmembrane #status predicted <TM5>
() 244-264/Domain: transmembrane #status predicted <TM7>
() 281-301/Domain: transmembrane #status predicted <TM6>
() 281-301/Domain: transmembrane #status predicted <TM6>
() 33-453/Domain: transmembrane #status predicted <TM6>
() 408-428/Domain: transmembrane #status predicted <TM9>
() 408-428/Domain: transmembrane #status predicted <TM6>
() 408-428/Domain: transmembrane #status predic
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A,Molecule type: mRNA
A,Residues: 24-32;254-256,290-292;316-317,376-379 <VIW>
A,Experimental source: Dami megakaryotic cell line (ATCC CRL-9792) and platelets
C,Genetics:
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R;Vidal, R.; Ghiso, J.; Wisniewski, T.; Frangione, B.
FEBS Lett. 393, 19-23, 1996
A;Title: Alzheimer's presentlin 1 gene expression in platelets and megakaryocytes. Ider A;Reference number: S71401; MUID:96397521; EMID:8804415
A;Accession: S71401
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A;Cross-references: GDB:135682; OMIM:104311
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A; Residues: 1-467 < SHE>
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Best Local Similarity 99.6%;
Matches 465; Conservative 1
        61
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QVVEQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE 120
                                                                                                                                                                        MTELPAPLSYFONAOMSEDNHLSNTVRSONDNREROEHNDRRSLGHPEPLSNGRPQGNSR
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Pred. No. 1.3e-177;
1; Mismatches 1; Indels
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presentlin I-463 - human classification of presentlin I-467, I-463 and A,Title: Identification and characterization of presentlin I-467, I-463 and
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A; Residues: 1-463 <SAH>
A; Cross-references: EMB
C; Superfamily: presenil
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                                                                                                                                                           YJGEVFKTYNADIYITVALLIMITYKQVGNISIHWKGFLRIQQAYLIMISALMISALVFIKY
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                              GDPEAQRRVSKNSKHNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
                                                                                         LPEWTAWLILAVISVYDLVAVLCLKGPLRMLVETAQERNETLFPALIYSSTMVWLVNWAE
          GDPEAQRRVSKNSKYNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
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98.7%;
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Pred. No. 2.9e-175;
1; Mismatches 1;
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A;Title: Molecular cloning, sequencing, and brain expression of the A;Accession: JC5080; MUID:97079199; PMID:8920931
A;Accession: JC5080
A;Status: nucleic acid sequence not shown
A;Molecule type: mRNA
A;Residues: 1-467 <CAlb
A;Cross-references: EMBL:Z71333; NID:g1707591; PIDN:CAA95930.1; PID A;Experimental source: brain
C;Comment: This protein is an intergral membrane process.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Genetics:
A;Gene: ps1
A;Map position: 14
C;Superfamily: presentlin
C;Keywords: transmembrane #status predicted <TM1>
F;82-100/Domain: transmembrane #status predicted <TM2>
F;133-154/Domain: transmembrane #status predicted <TM2>
F;134-155/Domain: transmembrane #status predicted <TM3>
F;164-185/Domain: transmembrane #status predicted <TM3>
F;295-213/Domain: transmembrane #status predicted <TM5>
F;221-238/Domain: transmembrane #status predicted <TM5>
F;244-261/Domain: transmembrane #status predicted <TM6>
F;408-428/Domain: transmembrane #status predicted <TM6>
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C;Species: Microcebus murinus (lesser mouse lemur)
C;Date: 31-Jan-1997 #sequence_revision 31-Jan-1997 #text_change 20-Jun-2000
C;Accession: JC5080
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TLLLIAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI
                                                  VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACEVAILIGLCL
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Pred. No. 7.1e
L2; Mismatches
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F;129-150/Domain: transmembrane #status predicted <TM2>
F;160-181/Domain: transmembrane #status predicted <TM3>
F;191-209/Domain: transmembrane #status predicted <TM4>
F;217-234/Domain: transmembrane #status predicted <TM5>
F;240-257/Domain: transmembrane #status predicted <TM6>
F;404-424/Domain: transmembrane #status predicted <TM7>
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C;Superfamily: presenilin
C;Keywords: transmembrane protein
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C; Comment: This protein is an i
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A; Residues: 1-463 < CAL>
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Best Local S
Matches 438
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                                                                                                                                    TLLLAIFKKALPALPISITEGLVEYFATDYLVQPFMDQLAFHQFYI 467
                                                                                                                                                                                                                                                      GDPEAQRRVSKNTKYNAQGTEREAQASVPENDDGGFSEEWEAQRDSQLGPHRSTSVSRAA
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Pred. No. 1.5e-166
2; Mismatches 13
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Nature 375, 754-760, 1995
Nature 375, 754-760, 1995
A;Title: Cloning of a gene bearing missense mutations A;Reference number: I58095; MUID:95319502; PMID:75964
A;Accession: I78388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Mus musculus (house mouse)
C;Date: 27-Feb-1997 #sequence_revision 27-Feb-1997 #text_change
C;Accession: I78388
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Best Local :
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                        TLLLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI
                                                                                              VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
                                                                                                                                         GDPEAQRRVPKNPKYNTQRAERETQDSGSGNDDGGFSEEWEAQRDSHLGPHRSTPESRAA
                                                                                                                                                                       GDPEAORRVSKNSKHNAESTERESODTVAENDDGGFSEEWEAORDSHLGPHRSTPESRAA
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TLILLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI
                                                                    VQELSGSILTSEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
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Pred. No. 6.5e-166;
9; Mismatches 17;
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D.; Brookes, A.; Sanseau,
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presentlin-alpha - African clawed frog

(;Species: Xenopus laevis (African clawed frog)

C;Date: 04-Jun-1997 #sequence_revision 18-Jul-1997 #text_change 20-Jun-2000

C;Accession: JC5390

R;Tsujimura, A.; Yasojima, K.; Hashimoto-Gotoh, T.

Biochem. Biophys. Res. Commun. 231, 392-396, 1997

A;Title: Cloning of Xenopus presentlin-alpha and -beta cDNAs and their diffe A;Reference number: JC5390; MUID:97223465; PMID:9070286

A;Accession: JC5390

A;Status: nucleic acid sequence not shown

A;Molecule type: mRNA

A;Residues: 1-433 <TSU
A;Cross-references: DDH;DB4427; NID:g1944353; PIDN:BAA19570.1; PID:g1944354 their differential exp:

A;Experimental source: brain C;Comment: This protein plays a role in negative regulation C;Superfamily: presentlin F;48-66/Domain: transmembrane #status predicted <TM1> F;99-119/Domain: transmembrane #status predicted <TM2> ō, apoptotic cascades

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F;130-149/Domain: t
F;161-178/Domain: t
F;161-203/Domain: t
F;210-227/Domain: t
F;374-394/Domain: t
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N,Alternate names: Alzheimer's disease protein 3
C,Species: Homo sapiens (man)
C,Date: 20-Jul-1996 #sequence_revision 13-Mar-1997 #text_change 29-Sep-1999
C,Accession: S63684
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A;Status: preliminary; nucleic
A;Molecule type: mRNA
A;Residues: 1-374 <SAH>
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R;Sahara, N.; Yahagi, Y.; Takagi, H.; Kondo, FEBS Lett. 381, 7-11, 1996
A;Title: Identification and characterization
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Cross-references: GDB:135682; OM
Map position: 14224 3-14924.3
(Superfamily: presenilin
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                                                     MTELPAPLSYFQNAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR
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                     MTELPAPLSYFQNAQMSEDNHLSNT----NDNRERQEHNDRRSLGHPEPLSNGRPQGNSR
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98.1%;
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82.8%;
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                                                                                                                                                                                                                    OMIM: 104311
                                                                                                                                                                                                                                                                           NID:g1244639;
                                                                                                                Score 1584; DB 2;
Pred. No. 7.6e-116;
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6; Mismatches
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Pred. No. 1
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                                                                                                 Mismatches
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C:Species: Xenopus laevis (African clawed frog)
C:Species: Xenopus laevis (African clawed frog)
C:Date: 04-Jun-1997 #sequence_revision 18-Jul-1997 #text_change 20-i
C:Accession: JC5391
R:Tsujimura, A.; Yasojima, K.; Hashimoto-Gotch, T.
Biochem. Biophys. Res. Commun. 231, 392-396, 1997
A;Fitle: Cloning of Xenopus presenilin-alpha and -beta cDNAs and the A;Accession: JC5391
A;Reference number: JC5390; MUID:97223465; PMID:9070286
A;Accession: JC5391
A;Status: nucleic acid sequence not shown
A;Molecule type: mRNA
A;Residues: 1-449 <TSUS
A;Cross-references: DDBJ:DB4428; NID:9194355; PIDN:BAA19571.1; PID
A;Experimental source: brain
C;Comment: This protein plays a role in negative regulation of apop:
C;Superfamily: presentlin
F;91-109/Domain: transmembrane #status predicted <TM1>
F;173-192/Domain: transmembrane #status predicted <TM1>
F;204-221/Domain: transmembrane #status predicted <TM9>
F;230-246/Domain: transmembrane #status predicted <TM9>
F;390-410/Domain: transmembrane #status predicted <TM9>
Fixedicted <TM9

Fixedicted <
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MAEGDPEAQRRVSKUSKHNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPES
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                                                                                                                                       TYIYLSEVFKTYNIAMDYPTLFMVIMNFGAVGMICIHWKGPLQLQQAYLINISALMALVF
                                                                                                                                                               SFIYLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGFLRLQQAYLIMISALMALVF
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                                                                                    NSETTV---ENEEEEITLKYGARHVIMLFVPVTLCMVVVVATIKSVSFYTEKDGQLIYTP
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Pred. No. 2.8e-106;
7; Mismatches 75;
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A;Gene: GDB:PSEN2; AD4; STM2; PS2; E5-1
A;Cross-references: GDB:633044; OMIM:600759
A;Map position: 1q31-1q42
C;Superfamily: presentlin
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N;Alternate names: Alzheimer's disease protein 4
C;Species: Homo sapiens (man)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 17-Nov-2000
C;Accession: A56993; I58098
R;Levy-Lahad, E; Wasco, W; Poorkaj, P; Romano, D.M.; Oshima, J.; Pettings
Science 269, 973-977, 1995
Science 269, 973-977, 1995
A;Title: Candidate gene for the chromosome 1 familial Alzheimer's disease 16
A;Reference number: A56993; MUID:95365816; PMID:7638622
A;Accession: A56993
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A;Residues: 1-122,'P',124-448 <RE2>
A;Cross-references: GB:L44577; NID:g950347; PIDN:AAC42012.1;
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R;Rogaev, E.I.; Sherrington, R.; Rogaeva, E.A.; Levesque, G.; Ikeda, M.; Liang,
; Cohen, D.; Lannfelt, L.; Fraser, P.E.; Rommens, J.M.; St George-Hyslop, P.H.
Nature 376, 775-778, 1995.
Natur
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03; Conservative
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                                    QELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCLT
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                                                                                                    DPSSQGAL--QLPYDPE-MEEDSYDSFGE---PSYPEVFEPPLTGYPG
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Seven trans-membrane domain protein AD3LP/AD5 - human C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 31-May-1996 #sequence_revision 31-May-1996 #text_change 29-Sep-1999
C;Accession: I39174
R;Li U; Ma, U; Potter, H.
Proc. Natl. Acad. Sci. U.S.A. 92, 12180-12184, 1995
A;Title: Identification and expression analysis of a potential familial Alzh A;Reference number: I39174; MUID:96109229; PMID:8618867
A;Rocession: I39174
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Kolecule type: mRNA
A;Kolecule type: mRNA
A;Rocession: I-442 <-RES>
A;Cross-references: EMBL:U34349; NID:g1079575; PIDN:AAC50290.1; PID:g1079576
C;Superfamily: presenilin
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                                                                 ---- 33133
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                                                                                           QELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCLT
                                                                                                                                     DPSSQGALQL----PYDPEMEDSYDSFGEPSYPEVFEPPLTGYPG--
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                                                                 - BEBSQGGVKLGLGDF1FYSVLVGKAAATGSGDWNTTLACFVAILIGLCLT
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; Pred. No. 1.4e-99
40; Mismatches 8:
432
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dise

R;anonymous, The C. elegans Sequencing Consortium.
Science 282, 2012-2018, 1998
A;Title: Genome sequence of the nematode C. elegans: a platform for investigating biolog A;Reference number: A75000; MUID:99069613; PMID:9851916
A;Note: see websites genome.wustl.edu/gsc/C_elegans/ and www_sanger.ac.uk/Projects/C_ele A;Note: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and

protein F35H12.3 [imported] - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 10-May-2001 #sequence_revision 10-May-2001 #C;Accession: E89453

#text_change

09-Nov-2001

RESULT E89453

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A;Accession: E89453
A;Status: preliminar:
A;Molecule type: DNA
A;Residues: 1-836 <S
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A;Gene: F35H12.3
A;Map position: X
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C;Species: Caenorhabditis elegans
C;Date: 10-Apr-1996 #sequence_revision 19-Apr-1996 #text_change
C;Accession: S60253
R;Levitan, D.; Greenwald T
                                                                                                                                                                                          R; Devitan, D.; Greenwald, I.
Nature 377, 351-354, 1995
A;Title: Facilitation of lin-12-mediated signalling by A;Reference number: S60253; MUID:96032531; PMID:7566091
A;Accession: S60253
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S60253
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A;Molecule type: mRNA
A;Residues: 1-461 <LEV>
A;Cross-references: EMBL:U3566C
C;Superfamily: presentlin
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/Status: preliminary
/Status: preliminary
/Molecule type: DNA
/Residues: 1-836 <STO>
/Cross-references: GB:chr X, PIDN:AAA83176.1; PID:gl109863; GSPDB:GN00028; CESP:F35H12.
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Best Local
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                                                                                          Similarity
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                                                                                                                                                                                                                                                                                                                                                                                            DOLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKYLP 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QEDENVVEEAELKYGASHVIHLFVFVSLCMALVVFTMVTITFYSQNNGRHLLYTFFVRET
                                                                                                                                                                                                                                                                                                                                                                                                                     SYF--DWNTTIACYVAILIGICFTLVLLAVFKRALPALPISIFSGLIFYFCTRWIITPFV
                                                                                                                                                                                                                                                                                                                                                                                                                                            ATASGDWNTTIACEVAILIGLCLTLLLLAIFKKALPALPISITEGLVEYEATDYLVQPEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EEWEAQRDSHLGPHRSTPESRAAVQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKAS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EGDPEAQRRVSKNS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EWTVWFVLFVISVWDLVAVLTPKGPLRYLVETAQERNEPIFPALIYSSGVIYPYVLVTAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EWTAWLILAVISVYDLVAVLCLKGPLRMLVETAQERNETLFPALIYSSTMVW---LVNMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QEVLKSFDVSPSALLVLFGLGNYGVLGMMCIHWKGFLRLQQFYLITMSALMALVFIKYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DSIVEKGIMŠIGNALVMICVVVIMTVILIVFYKYKFÝKLIHGWLIVŠŠFILLFILFTTÍYV
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ETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFSFIYL
                         QEDENVVEEAELKYGASHVIHLFVPVSLCMALVVFTMNTITFYSQNNGRHLLSHPFVRET
                                                   EQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQ-LIYTPFTEDT
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                                                                              Conservative
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                                                                                                                                                                                   acid
                                                                            64;
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                                                                            Score 963.5; DB 2;
Pred. No. 2.2e-67;
4; Mismatches 100;
                                                                                                                                                                                   not
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C; Superfamily: presentlin
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A; Accession: T00724
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Best Local Similarity
Matches 145; Conserv
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 -HRSTPESRAAVQELSSSILA-----GEDPEE--
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C/Accession: T00724
R/Shinn, P.; Buehler, E.; Dewar, K.; Feng, J.; Kim, C.; Li, x eologis, A.; Ecker, J.R.
eologis, A.; Ecker, J.R.
submitted to the EMBL Data Library, April 1998
submitted to the EMBL Data Library April 1998
submitted to the EMBL Bata Library April 1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Residues: 1-453 <SHI>
A;Cross-references: EMBL:AC003981; NID:g3063438; PID:g3063457; GSPDB:GN00059; ATSP:F220
A;Experimental source: cultivar Columbia
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                                                                                                                                                                                                                                                                                         198 VALLIMNEGVVGMISIHWKG-PLRLQQAYLIMISALMALVFIKYLPEWTAWLILAVISVY
                                                                                                                                                                                                                                                                                                                                                                                                    138 IMISVĮVVMTILĮVVĻYKYRCYKVIHAWLIISSLLLĻFFFSFIYLGBVFKTYNVAVDYĮT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82 VIMLEVPVTLCMVVVVATIKSVSFYT----RKDGQLIYTFFTEDTETVGQRALHSILNAA 137
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                                                            SDSGSVELQAVRNHDVNOLGRENSHNMDYNATAVRD-IDNVDDGIGNGSRGGLERSPLVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         IIGVVAPVSICMFLVVLLTYSLSVTSDPQIRSAANLIYIENPSDSTTV--KLEGSLANAI 70
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                                                                                                                                                                                                              DLVAVLCLKGPLRMLVETAQERNETLFPALIY----
                                                                                                                                                                                                                                                          CFILLFNFTILGTLSVFAGGIPIVLRQCYMVVMGIVVAAWFTK-LPEWTTWFILVALALY
                                                                                                                                                                                                                                                                                                                                                           VFVVLIAAVTEILVLLEYYNETNELKHYMRESAEFVLGTMGGAIFLSIIQHESIPVDSIT
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                                                                                                                MAEGDPEAQ-----RRVSKNSKHNAESTERESQDTVAENDDG-
                                                                                                                                                                 DLVAVLAPGGPLKLLVELASSRDEEL-PAMVYEARPTVSSGNQRRNRGSSLRALVGGGGV 248
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 539.5; DB 2;
Pred. No. 2.3e-34;
9; Mismatches 144;
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
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RA Klausner R.D., Collins F.S., Wagner L., Schaefer C.F., Bhat N.K.,
RA Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heich F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heich F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Hakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.
"Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RT Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A Pelletier E., Vico V., Anthouard V., Rowen L., Madan A., Qin S., Sun H., Du H., Pepin K., Artiguenave F., Robert C., Cruaud C., Bruels T., Jaillon O., Friedlander L., Samson G., Brottier P., Lander B., Aniere F., Samain S., Creepeau H., Abbasi N., Alach N., Boscus D., Dickhoff R., Dors M., Dubois I., Friedman C., Gouyvenoux M., James R., Madan A., Mairey-Estrada B., Mangenot S., Martins N., Menard M., Oztas S., Ratcliffe A., Shaffer T., Trask B., Vacherie B., Bellemere C., Belser C., Besnard-Gonnet M., Vacherie B., Bellemere C., Belser C., Besnard-Gonnet M., Bartol-Mavel D., Boutard M., Britez-Silla S., Combette S., Buffer S., Bluet E., Bordelais I., Dubois M., Vega-Czarny N., Bataille E., Bluet E., Bordelais I., Dubois M., Vega-Czarny N., Bataille E., Bluet E., Bordelais I., Dubois M., Vega-Czarny N., Bataille E., Gluet E., Roy A., Santte-Marthe L., Andersten D., Wunderle E., Gauguet G., Roy A., Santte-Marthe L., Andersten J., Verdier J., Verdier-Discala C., Hillier L.W., Fulton L., McPherson J., Antsuda F., Wilson R., Scarpelli C., Gyapay G., Wincker P., Saurin W., Antsuda F., Waterston R., Hood L., Weissenbach J., "The DNA sequence and analysis of human chromosome 14.";
   Steiner H., Rom
Loetscher H., J
"Amyloidogenic
                                                                                                                                                                                       Zhang J., Diehl T., Levesque G., Fraser P., Hass C., Koo B.H., Seubert P., St George-Hyslop P., Teplow D.B., Selkoe D.J.; "Presenilin proteins undergo heterogeneous endoproteolysis between Thr291 and Ala299 and occur as stable N- and C-terminal fragments i normal and Alzheimer brain tissue."; Neurobiol. Dis. 3:325-337(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=96160372; PubMed=8574969;
Kovacs D.M., Fausett H.J., Page K.J., Kim T.-W., Moir
Koratam D.E., Hollister R.D., Hallmark O.G., Mancini H
Merriam D.E., Hollister R.D., Tanzi R.E., Wasco W.;
Felsenstein K.M., Hyman B.T., Tanzi R.E., Wasco W.;
"Alzheimer-associated presenilins 1 and 2: neuronal ex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Skin;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MAR-1996)
IND MUTAGENESIS OF MET-292.
114554; PubMed=10545183;
Romig H., Pesold B., Philipp
I., Jacobsen H., Haass C.;
mic function of the Alzheimer'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hashimoto-Gotoh T.,
R-1996) to the EMBL/GenBank/DDBJ
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INTERACTION WITH DELTA-2 CATENIN:
MEDLINE-99155075; PubMed-10037471;
Levesque G., Yu G., Nishimura M., Zhang D.M., Le
Xu D., Liang Y., Rogaeva E., Ikeda M., Duthie M.
VanderVere P., Bayne M.L., Strader C.D., Rommens
St George-Hyslop P.;
"Presenilins interact with armadillo proteins in
neural-specific plakophilin-related protein and
J. Neurochem. 72:999-1008(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=20062913;
Ray W.J., Yao M.,
Selkoe D.J., Kopan
"Cell surface pres
                                                                                    Sai X., A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUNCTION, AND MUTAGENESIS OF ASP-257 AND ASP-385.

MEDITINE=20359495; PubMed=10899933;
Berezovska O., Jack C., McLean P., Aster J.C., Hicks C., Xia W.,
Wolfe M.S., Kimberly W.T., Weinmaster G., Selkoe D.J., Hyman B.T.;
Weinmaster G., Selkoe D.J., Hyman B.T.;
"Aspartate mutations in presentlin and gamma-secretase inhibitors
"Aspart notchl proteolysis and nuclear translocation with relative
preservation of notchl signaling.";
J. Neurochem. 75:583-593(2000).
          [20]
COMPONENT
                                     Sai K., Kawamura Y., Kokame K., Yamaguchi H., Shiraishi Suzuki T., Kawaichi M., Miyata T., Kitamura T., De Stro Yanagisawa K., Komano H.; "Endoplasmic reticulum stress-inducible protein, Herp, presenilin-mediated generation of amyloid beta-protein J. Biol. Chem. 277:12915-12920(2002).
                                                                                                                                                                                                                                                                                                                                                                                      Baki I., Marambaud P., Efthimiopoulos S., Georgakopoulos A., Cui W., Shioi J., Koo E., Ozawa M., Friedrich V.L., Robakis "presenilin-1 binds cytoplasmic epithelial cadherin, inhibit cadherin/120 association, and regulates stability and funct the cadherin/catenin adhesion complex."; Proc. Natl. Acad. Sci. U.S.A. 98:2381-2386(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=20283925; PubMed=10811883; Kulic L., Walter J., Multhaup G., Teplc Kulic L., Capell A., Steiner H., Haass Romig H., Capell A., Steiner H., Haass "Separation of presentlin function in a and endoproteolysis of Notch."; Proc. Natl. Acad. Sci. U.S.A. 97:5913-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature
[14]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Selkoe D.J.;
"Two transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION, AND MUTAGENESIS OF ASP-257 MEDLINE=99221485; PubMed=10206644; Wolfe M.S., Xia W., Ostaszewski B.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     proteolysis
J. Biol. Che
                                                                                                                                                                                                                                                                                                        proteins.";
                                                                                                                                                                                                                                                                                                                    MEDLINE=98099802; PubMed=9437013; Zhang W., Han S.W., McKeel D.W., "Interaction of presentlins with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         endoproteolysis
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398:513-517(1999)
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presenilin-1 participates
f Notch.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MUTAGENESIS OF LEU-286.
            GAMMA-SECRETASE
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// PubMed=11799129;
// Yamaguchi
// Yitamu
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Mumm J., Schroeter
1 R., Goate A.M.;
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N., Wang
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Query Match
Best Local S
Matches 465
Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.

-i-FUNCTION: Probable catalytic subunit of the gamma-secretase complex, an endoprotease complex that catalyzes the intramembrane cleavage of integral membrane proteins such as Notch receptors and APP (beta-amyloid precursor protein). Requires the other members of the gamma-secretase complex to have a protease activity. May play a role in intracellular signaling and gene expression or in linking chromatin to the nuclear membrane. Regulates epithelial-catherin function (By similarity).

-i-SUBUNIT: Homodimer. Component of the gamma-secretase complex, a complex composed of a presenilin homodimer (PSEN1 or PSEN2), nicastrin (NCSTN), APHI (APHIA or APHIB) and PEN2. Such minimal complex is sufficient for secretase activity, although other components may exist. Predominantly heterodimer of a N-terminal (NTF) and a C-terminal (CTF) endoproteolytical fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8HXW5;
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                                                                                                                                                                                                                                                                                                       Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                                                                                                  Presenilin 1 (PS-1).
PSEN1 OR PSNL1 OR PS1.
                                                                                                                                                                                                                        Kusuda J., Osada N., Hida M., Sugano S., Hashimoto "Isolation and characterization of cDNA for macaque
                                                                                                                                                                                                                                                                                                                                                                             10-OCT-2003 (Rel. 42, Creat
10-OCT-2003 (Rel. 42, Last
15-MAR-2004 (Rel. 43, Last
Presentlin 1 (PS-1).
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TISSUE=Frontal cortex;
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InterPro; IPR001108; Peptidase A22A.
Pfam; PF01080; Presenilin; 1.
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                                                                                              NLGEVEKTYNVAVDYITVALLIWNEGVVGMISIHWKGPLRLQQAYLIMISALMALVEIKY
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                      VOELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
                                         VQELSSSILAGEDPEERGVK1GLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
                                                                           GDPEAQRRVSKNSKYNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
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> This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch). Associates with proteolytic processed C-terminal fragments Ct C19 of the amyloid precursor protein (ApP). Associates with NOTCH1. Binds to cadherin 1, beta-catenin, delta-2 catenin an plakophilin 4. Interacts with DOCK3. Interacts with HERPUD1, and FINB (By similarity).
> SUBCELLULAR LOCATION: Integral membrane protein. Golgi and endoplasmic reticulum (By similarity).
> PTM: Phosphorylated on serine residues (By similarity).
> SIMILARITY: Belongs to the presentlin family. Golgi stack.
> (BY SIMILARITY).
> (BY SIMILARITY). and C83 and

ion; Endoplasmic reticulum; G
PRESENILIN 1 NTF SUBUNIT (B
PRESENILIN 1 CTF SUBUNIT (B
POTENTIAL.
POTENTIAL. ALTERNATIVE PROTBOLYTIC CLEAVAGE (BY SIMILARITY)
ALTERNATIVE PROTEOLYTIC CLEAVAGE (BY SIMILARITY) Score 2354; Pred. No. 1 ODSEAOBD73BE3OF3 Mismatches DB 1; .5e-156; CRC64; Length 0,

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                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P79802;
15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence update)
15-MAR-2004 (Rel. 43, Last annotation update)
Presenilin 1 (PS-1).
PSEN1 OR PSNL1 OR PS1.
EMBL; Z71333; CAA95930.1; -. 
PIR; JC5080; JC5080. 
PIR; JC5081; JC5081. 
MEROPS; A22.001; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  presentlin 1 gene in Microcebus murinus.";
Biochem. Biophys. Res. Commun. 228:430-439(1996).
-!- FUNCTION: Probable catalytic subunit of the gamma-secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Microcebus murinus (Lesser mouse lemur).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Strepsirhini; Cheirogaleidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=97079199; PubMed=8920931;
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                                                                                                                                                                                                                                                                                                                           \ensuremath{\text{PTM}}\xspace . PTM: Phosphorylated on serine residues (By similarity). SIMILARITY: Belongs to the presentlin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Name=I-463
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ALTERNATIVE PRODUCTS:
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in Microcebus murinus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         splicing; Named isoforms=2;
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Transmembrane; Phosphorylation; Endoplasmic reticulum;
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InterPro; IPR001108; Peptidase_A22A
Pfam; PF01080; Presenilin; 1.
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                                                                                                                                                                                                                  DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLLFFFSFI
                                                                                                                                                                                                                                            PVVERDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE
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                                                  VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
                                                                                         GDPEAQRRVSKNSKHNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
                                                                                                                                       LPEWTAWLILAVISVYDLVAVLCLKGPLRMLVETAQERNETLFPALIYSSTMVWLVNMAB
                                                                                                                                                                         YLGBVEKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY
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              TLLLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI
                                       VQEISSIPASEDPEERGVKLGLGDFVFYSVLVGKASATASGDWNTTIACFVAILIGL
                                                                              GDPEAQRRVSKNTKYNAQGTERÉAQASVPÉNDDGGFSEEWEAQRDSQLGPHRSTSVSRAA
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Pred. No. 1.9e
12; Mismatches
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/FTId=VSP_005193.
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CYTOPLASMIC (POTENTIAL)
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***MENAL (POTENTIAL)
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RESULT 4
PSN1_MOUSE ST
ID PSN1_MOUSE ST
AC P49769; Q91WK6; (

STANDARD;; Q9JLP9;

PRT;

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RP SEQUENCE FROM N.A. (ISOFORM 2).

RP SEQUENCE FROM N.A. (ISOFORM 2).

RC STRAIN=FVB/N; TISSUE=Eye, Liver, and Retina;

RX MEDLINE=22388257; PubMed=12477932;

RX MEDLINE=22388257; PubMed=12477932;

RX Strausberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Hopkins R.F., Jordan H., Moore T., Wany J., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.J.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,

RA Richards S., McDewan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

RA Richards S., McDewan P.J., Schergen E.J., Lu X., Glibbs R.A.,

RA Richards S., McDewan P.J., Sodergren E.J., Lu X., Glibbs R.A.,

RA Richards S., McDewan P.J., Sodergren E.J., Lu X., Glibbs R.A.,

RA Willalon D.K., Muznuy D.M., Sodergren E.J., Lu X., Glibbs R.A.,

RA Wilting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

"Generation and initial analysis of more than 15,000 full-length human

"Tand mouse cDNA sequences.";

"Tand mouse cDNA sequences.";
                                                           MEDLINE=2031/861; PubMed=10854253;
Kashiwa A., Yoshida H., Lee S., Paladino
Dargusch R., Schubert D., Kimura H.;
"Isolation and characterization of novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. (ISOFORM 1).
STRAIN-SAM P8; TISSUE-Hippocampus;
Kumar V.B., Vyas K.C., Choudhary V.,
Morley J.E.;
"Molocita":
              J. Neurochem. 75:109-116(2000).
                                                 protein.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=97442406; PubMed=9295283; Mitsudd N., Roses A.D., Vitek M.P.; "Transcriptional regulation of the mouse J. Biol. Chem. 272:23489-23497(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sherrington R., Rogaev E.I., Liang Y., Rogaeva E.A., Levesque Ikeda M., Chi H., Lin C., Li G., Holman K., Tsuda T., Mar L., Foncin J.-F., Bruni A.C., Montesi M.P., Sorbi S., Rainero I., Pinessi L., Nee L., Chumakov I., Pollen D., Brookes A., Pinessau P., Polinsky R.J., Wasco W., da Silva H.A.R., Haines J Pericak-Vance M.A., Tanzi R.E., Roges A.D., Fraser P.E., Rommens J.M., St George-Hyslop P.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PSENI OR PSNL1 OR AD3H,
Mus musculus (Mouse)
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-1996 (Rel.
01-OCT-1996 (Rel.
15-MAR-2004 (Rel.
                                                                                                                                 FISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Molecular cloning and tissue distribution senenscence accelerated mice (SAM P8) mice. Submitted (MAY-1999) to the EMBL/GenBank/DD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature 375:754-760(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Cloning of a gene bearing missense mutations in early-onset familial Alzheimer's disease.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. (ISOFORM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
(S182 protein).
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                                                                                                                                                                               U.S.A. 99:16899-16903(2002)
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ytic subunit complex that
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t catalyzes the intrame
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   PIR; 178388; 178388.

MEROPS; A22.001; ---
MGD; MGI:1202717; Psen1.
GO; GO:0005783; C:endoplasmic reticulum;
GO; GO:0016020; C:membrane; IDA.
GO; GO:0005515; F:protein binding; IPI.
InterPro; IPR006639; Peptidase_A22.
InterPro; IPR010108; Peptidase_A22A.
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SMART; SM00730; PSN; 1.
Transmembrane; Phosphorylation;
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EMBL; AF007560; AAB72049.1; --
EMBL; AF149111; AAE13153.1; --
EMBL; BC014744; AAE14744.1; --
EMBL; BC030409; AAE30409.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for con entities requires a license agreement (See http://www.isb-sib.ch/ar or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This
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                                                                                                                                                                                                                                                                             Alternative splicing
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IsoId=P49769-2; Sequence=VSP_008381, VSP_00838 Note=Due to intron retention. No experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IsoId=P49769-1; Sequence=Displayed;
 on serine residues (By si to the presenilin family.
                                                    POTENTIAL.

***MENAL (POTENTIAL)
                                                                                                                 POTENTIAL. (POTENTIAL)
               CYTOPLASMIC (POTENTIAL)
POTENTIAL.
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CYTOPLASMIC (POTENTIAL)
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SEQUENCE FROM N.A.
STRAIN-Wistar; TISSUE=Brain;
MEDLINE=971.99371, PubMed=904/347;
Taniguchi T., Hashimoto T., Taniguchi R., Shimada K.,
Yasuda M., Nakai M., Terashima A., Koizumi T., Maeda
"Cloning of the CDNA encoding rat presenilin-1.";
Gene 186:73-75(1997).
                                                                                                                         Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                              PSN1_RAT STANDARD; PRT; 4
p97887; P97529; 15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence up
15-MAR-2004 (Rel. 43, Last annotation
Presentlin 1 (PS-1) (S182 protein).
                                                                                                             NCBI_TaxID=10116;
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Missing (In isoform 2).
/FIId=VSP 008382.
/FIId=VSP 008382.
S -> T (IN STRAIN SAM P8).
D -> E (IN STRAIN SAM P8).
E -> CM (IN STRAIN SAM P8).
V -> L (IN STRAIN SAM P8).
ER -> RRD (IN STRAIN SAM P8).
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ALTERNATIVE PROJ
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DLVAV -> GKAQD
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Pred. No. 8
                                                                                                                            Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Rat
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       complex, an endoprotease complex that catalyzes the intramembrane cleavage of integral membrane proteins such as Notch receptors and APP (beta-amyloid precursor protein). Requires the other members of the gamma-secretase complex to have a protease activity. May play a role in Intracellular signaling and gene expression or in linking chromatin to the nuclear membrane. Regulates epithelial-catherin function (By similarity).

SUBUNIT: Homodimer. Component of the gamma-secretase complex, a complex composed of a presenilin homodimer (PSENI or PSEN2), nicastrin (NCSTN), APH1 (APH1A or APH1B) and PEN2. Such minimal complex is sufficient for secretase activity, although other components may exist. Predominantly heterodimer of a N-terminal Nesociates with proteolytic processed C-terminal fragment.

Associates with proteolytic processed C-terminal fragments C83 and NOTCH1. Binds to cadherin 1, beta-catenin, delta-2 catenin and plakophilin 4. Interacts with DOCK3. Interacts with HERPUD1, FINA and FINB (By similarity).

-- SUBCELULAR LOCATION: Integral membrane protein. Golgi and endoplasmic reticulum (By similarity).

-- SUBCILLARITY: Belongs to the presentlin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAINEWistar; TISSUB=Brain;
MEDLINE=9655562; FubMed=8710164;
Takahashi H., Murayama M., Takashima
Noguchi K., Imahori K.;
    CONFLICT
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DOMAIN
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SMART; SM00730;
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EMBL; D82363;
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SEQUENCE FROM N.A.
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DOMAIN
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InterPro; IPR001108; Peptidase_A22A.
Pfam; PF01080; Presenilin; 1.
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BAA11564.1; -.
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PRESENILIN 1
CYTOPLASMIC (
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POTENTIAL)
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ALTERNATIVE PROTEOLYTIC
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**Molecular cloning of bovine presentlin 1 gene.";

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**Molecular cloning of bovine presentlin 1 gene.";

**Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.*

**C cleavage of integral membrane proteins such as Notch receptors and complex, an endoprotease complex that catalyzes the intramembrane complex to have a protease activity. May be the gamma-secretase complex to have a protease activity. May confine gamma-secretase complex to have a protease activity. May confine chromatin to the nuclear membrane. Regulates epithelial-cadherin function (By similarity).

**C play a role in intracellular signaling and gene expression or in cadherin function (By similarity).

**C cleavage of the gamma-secretase epithelial-cadherin function (By similarity).

**C cleavage of the gamma-secretase complex, a complex composed of a presentlin homodimer (PSEN1 or PSEN2), nicastrin (NCSTN), APH1 (APH1A) or APH1B) and PEN2. Such minimal components may exist. Predominantly heterodimer of a N-terminal (NTF) and a C-terminal (CTF) endoproteolytical fracmment
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Q9XT97,
16-OCT-2001 (Rel. 40, Cr
16-OCT-2001 (Rel. 40, Lr
15-MAR-2004 (Rel. 43, Lr
Terrarilin 1 (PS-1).
                                                                                                                                                                                                                                                                                                                                                                                      Bukaryota; Metazoa; Chordata; Craniat
Mammalia; Eutheria; Cetartiodactyla;
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PSEN1
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Pred. No. 6.9
                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; actyla; Ruminantia; Pecora; Bovoidea;
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InterPro; IPR001108; Peptidase A22A.
Pfam; Pf01080; Presenilin; 1.
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SUBCELLULAR LOCATION: Integral membrane protein.
endoplasmic reticulum (By similarity).
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                         YLPEWTAWLILAVISVYDLVAVLCPKGPLRMLVETAQERNETLFPALIYSSTMVWLVNMA
                                                    YLPEWTAWLILAVISVYDLVAVLCLKGPLRMLVETAQERNETLFPALIYSSTMVWLVNMA
                                                                                                                  IYLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWXGFLRLQQAYLIMISALMALVFIK
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                                                                                                                                                                                           EDTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFSF
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                                                                                             IYLGEVFKTYNVAMDYISVALLIWNFGVVGMIAIHWKGPLRLQQAYLIMISALMALVFIK
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Pred. No. 3.96
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Cloning of Kenopus presentilin-alpha and -beta CDNAs and their differential expression in oogenesis and embryogenesis.";

Biochem. Biophys: Res. Commun. 231:392-396(1997).

Biochem. Brophys: Res. Commun. 231:392-396(1997).

Complex, an endoprotease complex that catalyzes the intramembrane cleavage of integral membrane proteins such as Notch receptors (By similarity). May play a role in negative regulation of apoptotic cascades during oogenesis and embryogenesis, and in developmentally matured tissues such as brain tissue.

Complex, a complex composed of a presenilin homodimer (B9-alpha or P8-beta), nicastrin (NCSTN), APHI and PENZ (Probable).

Complex, a complex composed of a presenilin homodimer (B9-alpha or P8-beta), nicastrin (NCSTN), APHI and PENZ (Probable).

Complex is complex composed of a presenilin homodimer (B9-alpha or P8-beta), nicastrin (NCSTN), APHI and PENZ (Probable).

Complex is complex composed of a presenilin homodimer (B9-alpha or P8-beta), nicastrin (NCSTN), APHI and PENZ (Probable).

Complex is complex composed of a presenilin homodimer (B9-alpha or P8-beta), nicastrin (NCSTN), APHI and PENZ (Probable).

Complex is complex composed of a presenilin homodimer (B9-alpha or P8-beta), nicastrin (NCSTN), APHI and PENZ (Probable).
InterPro; IPR006639; Peptidase_A22.
InterPro; IPR001108; Peptidase_A22A.
Pfam; Pr01080; Presentiin; 1.
PRINTS; PR01072; PRESENTIIN.
SWART; SW00730; PRN; 1.
Transmembrane; Glycoprotein.
TRANSMEM 48 68 POTENTIAL
TRANSMEM 99 119 POTENTIAL
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15-JUL-1999 (Rel. 3
10-OCT-2003 (Rel. 4
Presenilin alpha.
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O12976;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
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MEROPS; A22.001;
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                                                                                                                                                                                          EMBL; D84427; BAA19570.1;
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38, Last sequence 42, Last anno
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
NCBI TaxID=7955;
fil TaxID=7955;
              beta-peptide production and requires its function in amyloidogenesis."; Biochemistry 38:13602-13609(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                              BRARE
                                                                                                                                                SEQUENCE FROM N.A., FUNCTION, AND MEDLINE=99452701; PubMed=10521267;
                                                                                             "Zebrafish
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NDRRSLGHPEPLSNGRPQGNSRQVVEQDEEEDEELTLXYGAXHVIMLFVPVTLCMVVVVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EWEAQRDSHLGPHRSTPESRAAVQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NETLFPALIYSSTMVWLVNWAEGDPEAQRRVSKNSKHNAESTERESQDTVAENDDGGFSE
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(Rel. 42, Last annotation
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Pred. No. 3.8e-118
6; Mismatches 48
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Matches 334
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CONFLICT
SEQUENCE
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TRANSMEM 71
TRANSMEM 122
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                                                                                                                                                                                                                                                                                                                                                                                                                      TRANSMEM
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF01080; Presenilin; 1
PRINTS; PR01072; PRESENILIN
SMART; SM00730; PSN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZFIN; ZDB-GENE-991119-4; psen1.
InterPro; IPR006639; Peptidase A22.
InterPro; IPR001108; Peptidase A22A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AJ132931; CAB40386.1; EMBL; BC054639; AAH54639.1;
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Strausberg R.L.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBDAT: 10000dimer. Component of the gamma-secretase complex composed of a presentlin homodimer (PSENI or nicastrin, APH1 and PEN2 (Probable).

SUBCELLULAR LOCATION: Integral membrane protein. Golg endoplasmic reticulum (By similarity).

DEVELOPMENTAL STAGE: Expressed both maternally and zy Ubiquitously expressed during embryogenesis.

PTM: Cleaved, probably due to some autocleavage.

SIMILARITY: Belongs to the presenilin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.
FUNCTION: Probable catalytic subunit of the gamma-secretase complex, an endoprotease complex that catalyzes the intramembrane cleavage of integral membrane proteins such as Notch receptors (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        similarity).
239
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                                                                                                                                                                                                                                                                                             Similarity
                   LAVISVYDLVAVLCLKGPLRMLVETAQERNETLFPALIYSSTMVWLVNMAEGDPEAQRRV 309
                                                    NVAMDYFTLALIIWNFGVVGMICIHWKGPLRLQQAYLIMISALMALVFIKYLPEWTAWLI
                                                                      NVAVDYITVALLIWNFGVVGNISIHWKGPLRLQQAYLIMISALMALVFIKYLPEWTAWLI
                                                                                                                                     LHSILNAAIMISVIVVMTILLVVLYKXRCYKVIHAWLIISSLLLLFFFSFIYLGEVFKTY
                                                                                                                                                                EELTLKYGAKHVIMLFIPVTLCMVVVVATIKSVSFYTQKDGQQLIYTFFREDTETVGQRA
                                                                                                                                                                                     EELTLKYGAKHVIMLFVFVTLCMVVVVATIKSVSFYTRKDG-QLIYTPFTEDTETVGQRA 129
                                                                                                                                                                                                                        QNAANNVLNDGMDTSRHTSSTAAPPSRNEVELNGQP-----PTAPPPQVVTDSEEDED
                                                                                                                                                                                                                                                   QNAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSRQVV-EQDEEED
                                                                                                          LHSMLNAIIMISVIVVMTLVLVVLYKYRCYKVIQAWLFFSNLLLLFFFSLIYLGEVFKTY
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                                                                                                                                                                                                                                                                           Score 1614.5; DB 1;
Pred. No. 3.8e-105;
2; Mismatches 78;
                                                                                                                                                                                                                                                                                                                                              PROBABLY LOSS OF FUNCTION MISSING (IN REF. 2).

A -> p (IN REF. 2).
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SAETR-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      RA TBUJINUTA A. Yasojima K., Hashimoto-Gotch T.;

RA TBUJINUTA A. Yasojima K. Hashimoto-Gotch T.;

RT "Cloning of Xenopus presenilin-alpha and -beta cDNAs and their

RT differential expression in oogenesis and embryogenesis.";

RI Biochem. Blophys. Res. Commun. 231:392-396(1997).

RL Biochem. Blophys. Res. Commun. 231:392-396(1997).

RC -! FUNCTION: Probable catalytic subunit of the gamma-secretase

CC complex, an endoprotease complex that catalyzes the intramembrane

CC cleavage of integral membrane proteins such as Notch receptors (By

Similarity). May play a role in negative regulation of apoptotic

CC cascades during oogenesis and embryogenesis, and in

developmentally matured tissues such as brain tissue.

CC : SUBNOIT: Homodimer. Probable component of the gamma-secretase

CC complex, a complex composed of a presentilh homodimer (PS-alpha or

CC : SUBNOILULAR LOCATION: Integral membrane protein (By similarity).

CC : SUBNCELLULAR LOCATION: Integral membrane protein (By similarity).

CC : SUBNCELLULAR LOCATION: Integral membrane protein (By similarity).

CC : SUBNCELLULAR LOCATION: Or and lung. Weak expression in testis,

CC intestine, liver and heart. Present in trace amounts in skeletal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 XENIA
PSN2 XENIA
012977;
15-JUL-1999
15-JUL-1999
10-OCT-2003
                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/anor send an email to license@isb-sib.ch).
                                                                       PRINTS; PRO1072; PRESENILIN SMART; SM00730; PSN; 1.
                                                                                                      InterPro; IPR006639; Peptidase A22.
InterPro; IPR001108; Peptidase A22A.
Pfam; PF01080; Presenilin; 1.
                                                                                                                                                                                 EMBL; D84428; BAA19571.1; -. PIR; JC5391; JC5391.
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NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                   TRANSMEM
                                                                                                                                                                 MEROPS; A22.002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=97223465; PubMed=9070286;
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                                                       Transmembrane;
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                                                                                                                                                                                                                                                                                                                                                                                   which it is nearly constant.
SIMILARITY: Belongs to the presentlin family.
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01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-MAR-2004 (Rel. 43, Last annotation update)
Presenilin 2 (PS-2) (STM-2) (ES-1) (AD3LP) (A
PSEN2 OR PSNL2 OR AD4 OR PS2 OR STM2
                                                                                                                                           SEQUENCE FROM N.A., AND VARIANT AD ILE-141.

MEDLINE=95365816; PubMed=7638622;
Levy-Lahad E., Wasco W., Poorkaj P., Romano D.M., Oshima J.
Pettingell W.H., Yu C.-E., Jondro P.D., Schmidt S.D., Wang CrowLey A.C., Fu Y.-H., Guenette S.Y., Galas D., Nemens E.,
Wijsman E.M., Bird T.D., Schellenberg G.D., Tanzi R.E.;
"Candidate gene for the chromosome 1 familial Alzheimer's d
                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vi
Mammalia; Eutheria; Primates; Catarrhini;
      SEQUENCE FROM TISSUE=Brain,
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locus.";
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RA Strausberg R.D. Collins F.S., Wagner L. Shemmen C.M., Schuler G.D., RA Altschul S.F., Zeeberg B., Buetcow K.H., Schaefer C.F., Bhat N.K., RA Altschul S.F., Zeeberg B., Buetcow K.H., Schaefer C.F., Bhat N.K., RA Altschul S.F., Zeeberg B., Buetcow K.H., Schaefer C.F., Bhat N.K., RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heieh F., Park RA, Stapleton M., Soares M.B., Bonaldo M.F., Casawant T.L., Schaeft T.E., RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., RR Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.W., RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Willalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Raha S.S., Warny D.M., Sodergren B.J., Lu X., Gibbs R.A., RA Willalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., RA Whiting M., Madan A., Young A.C., Sheychenko Y., Bouffard G.G., RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., RA Rodriguez A.C., Grimwood J., Schmutz J., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.", 171

Byco. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
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SEQUENCE FROM N.A.
Levy-Lahad E., Poorkaj P., Wa
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
Xu Y., Hu
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                                                                                                                                                                                                               Kovacs D.M., Fausett H.J., Page K.J., Kim T.-W., Moir R.D., Merriam D.E., Hollister R.D., Hallmark O.G., Mancini R., Felsenstein K.M., Hyman B.T., Tanzi R.E., Wasco W., "Alzheimer-associated presentlins 1 and 2: neuronal expression brain and localization to intracellular membranes in mammalian
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                          INTERACTIONS WITH FLNA AND FIND.
MEDLINE=9809802; pubMed=9437013;
Zhang W., McKeel D.W.,
"Interaction of presentlins with
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Princold E.A., Grouse L.H.,
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MEDLINE=20119269; PubMed=10652302; Kimberly W.T., Xia W., Rahmati T., Wolfe M.S., Selkoe D.J.; The transmembrane aspartates in presentiin 1 and 2 are obligatory gamma-secretase activity and amyloid beta-protein generation."; J. Biol. Chem. 275:3173-3178(2000).
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                                                                                 Finckh U., Mueller-Thomsen T., Mann U., Bggers C., Marksteiner J., Meins W., Binetti G., Alberici A., Hock C., Nitsch R.M., Gal A.; "High prevalence of pathogenic mutations in patients with early-onset dementia detected by sequence analyses of four different genes."; Am. J. Hum. Genet. 66:110-117(2000).

-i. FUNCTION: Probable catalytic subunit of the gamma-secretase complex, an endoprotease complex that catalyzes the intramembrane cleavage of integral membrane proteins such as Notch receptors and APP (beta-amyloid precursor protein). Requires the other members of the gamma-secretase complex to have a protease activity. May play a role in intracellular signaling and gene expression or in linking chromatin to the nuclear membrane. May function in the cytoplasmic partitioning of proteins.

-i. SUBUNIT: Interacts with DOCK3 (By similarity). Homodimer.

-i. SUBUNIT: Interacts with DOCK3 (By similarity). Homodimer.

(APHA) or APHIB) and PENZ. Such minimal complex is sufficient for presenting the present of the parma-secretase complex. Such minimal complex is sufficient for partitional paths of the component of the such a present of the parma and park 
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novel mutation in the predicted TM2 domain of the pres
Spanish patient with late-onset Alzheimer's disease.";
urogenetics 1:293-296(1998).
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                   secretase activity, although other with HERPUD1, FINA and FINB.
SUBCELLULAR LOCATION: Integral memb
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in C.M., Backhovens
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RESULT 11
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 disease (AD) [MIM:104300]; which is the most severe form of the disease, with complete penetrance and an onset occurring as early as 30 years of age. The second form is late-onset AD (LOAD), with mean age of onset greater than 58 years. AD is an autosomal dominant neurodegenerative disorder characterized by progressive dementia, parkinsonism, and deposition of fibrillar amyloid proteins as intraneuronal neurotibrillary tangles, extracellular amyloid proteins and vascular amyloid deposits.

-IDISEASE: Three causative genes have been identified that when mutated lead to presentle Alzheimer's disease: APP (amyloid procursor protein gene), PSENI and PSENI. These three genes account for half of the families with autosomal dominant presentle AD, which represent approximately 10% of the whole AD population. In addition, apolipoprotein E has been identified as a risk-modification.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modifying locus.
SIMILARITY: Belongs to the presentlin family.
DATABASE: NAME=Alzheimer Research Forum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pTM: Phosphorylated on serine residues. DISEASE: Defects in PSEN2 are a cause of earl disease (AD) [MIM:104300]; which is the most disease, with complete penetrance and an onse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     muscle and heart while isoform 2 is seen in the heart, brain, placenta, liver, skeletal muscle and kidney.
PTM: Heterogeneous proteolytic processing generates N-terminal C-terminal fragments.
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Event=Alternative spl
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                         LLLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI
                                                                                        QELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCLT;||
                                                                                                                                                                 DPEAQRRVSKNSKHNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAAV
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                                                                                                                                                                                                                                                                                                                                                             TETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLEFFSFIY
                                                                  BEL----
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                                                                                                                                                                                                                                   PEWTAWLILAVISVYDLVAVLCLKGPLRMLVETAQERNETLFPALIYSSTMVWLVNMAEG
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Pred. No. 7.4e
40; Mismatches
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RT proteins.";
RL Neurobiol. Dis. 5:323-333(1998).
RL Neurobiol. Dis. 5:323-333(1998).
CC -!-FUNCTION: Probable catalytic subunit of the gamma-secretase CC complex, an endoprotease complex that catalyzes the intramembrane CC cleavage of integral membrane proteins such as Notch receptors and CC APP (beta-amyloid precursor protein). Requires the other members CC of the gamma-secretase complex to have a protease activity. May CC play a role in intracellular signaling and gene expression or in CC linking chromatin to the nuclear membrane. May function in the CC cytoplasmic partitioning of proteins (By similarity).
CC -!-SUBUNIT: Homodimer. Component of the gamma-secretase complex, a complex composed of a presenilin homodimer (PSENI or PSENI), CC nicastrin (NCSTNI), APHI (APHIA or APHIB) and PENZ. Such minimal CC complex is sufficient for secretase activity, although other components may exist. Interacts with DOCK3. Interacts with ERRPUDI, FINA and FINB (By similarity).
CC -!-SUBCELLUTAR IOCATION: Integral membrane protein. Golgi and endoplasmic reticulum (By similarity).
CC -!-SUMILARITY; Belongs to the presenilin family.
   TRANSMEM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Microcebus murinus (Lesser mouse lemur).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Strepsirhini; Cheirogaleidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Calenda A., Mestre-Prances N., Czech C., Pradier L., Petter Perret M., Bons N., Bellis M., "Cloning of the presenilin 2 cDNA and its distribution in by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-JUL-1999 (Rel. 38, Last sequence update)
15-MAR-2004 (Rel. 43, Last annotation update)
Presenilin 2 (PS-2) (Fragment).
PSENZ OR PSNL2 OR PS2.
                                                                                                                                                                                                                                                                                 SMART; SM00730; PSN; 1.
Transmembrane; Phosphorylation;
                                                                                                                                                                                                                                                                                                                              InterPro; IPR006639; Peptidase_A22.
InterPro; IPR001108; Peptidase_A22A.
Pfam; PF01080; Presenilin; 1
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                                                                                                                                                                                                                                                                     Transmembrane;
CHAIN
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CYTOPLASMIC
                                                                                                                      CYTOPLASMIC (POTENTIAL)
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Query Match
Best Local Sim
Matches 301;
          A Sahara N., Shirasawa T., Mori H.;

Wa Sahara N., Shirasawa T., Mori H.;

Wa "Molecular cloning of bovine presentlin 2 gene.";

Will "Molecular cloning of bovine presentlin 2 gene.";

Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.

C -!- FUNCTION: Probable catalytic subunit of the gamma-secretase complex that catalyzes the intramembrane complex, an endoprotease complex to have a such as Notto receptors and App (beta-amyloid precursor proteins such as Notto receptors and App (beta-amyloid precursor protein). Requires the other members of the gamma-secretase complex to have a protease activity. May compley a role in intracellular signaling and gene expression or in linking chromatin to the nuclear membrane. May function in the cytoplasmic partitioning of proteins (By similarity).

C -!- SUBUNIT: Homodimer. Component of the gamma-secretase complex, a complex composed of a presentlin homodimer (PSEN1 or PSEN2), nicastrin (NCSTN), APHI (APHIA) or APHIB) and PEN2. Such minimal complex is sufficient for secretase activity, although other components may exist. Interacts with DOCK3. Interacts with HERRUDI, FIAN and FINB (By similarity).
                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; C
Mammalia; Eutheria; C
Bovidae; Bovinae; Bos
NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PSN2 BOVIN
Q9XT96;
16-OCT-2001
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                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Presenilin
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HERPUD1, FLI
SUBCELLULAR
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2 (PS-2).
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Last annotation updat
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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654321098765432
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1529.8
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1361.5
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675
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Gapop 10.0 , Gapext 0.5
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2391
1 MTELPAPLSYFQNAQMSEDN.....ATDYLVQPFMDQLAFHQFYI 467
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                                                                                                                                                                                  Match
                                                                                                                                                                                            Query
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   SPTREMBL_25:*
1: sp_archea:*
2: sp_bacteria:*
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sp_phage:*
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sp_virus:*
sp_virus:*
sp_virus:*
sp_unclassified:*
sp_virus:*
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invertebrate:*
   GenCore version 5.1.6
(c) 1993 - 2004 Compugen Ltd.
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Q90x07 gallus gall
Q8ws59 branchiostc
Q991x8 helix lucor
Q95x66 oryctolagus
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Q8hz65 camelus dro
Q9sdg2 oryza sativ
Q8dx12 pyrobaculum
Q807f12 clostridium
Q807f2 mus musculu
Q9has3 homo sapien
Q861z6 dictyosteli
Q98qx5 mycoplasma
Q861z6 dictyosteli
Q98qx5 mycoplasma
Q861z6 dictyosteli
Q98qx5 mycoplasma
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ALIGNMENTS

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OPOXOB OPOXOB OPOXOB PRELIMINARY; PRT; 468 AA. COOXOB; DT 01-DEC-2001 (TIEMBLIRE1. 19, Created) DT 01-DEC-2001 (TIEMBLIRE1. 19, Last sequence update) DT 01-DEC-2001 (TIEMBLIRE1. 25, Last sequence update) DT 01-DEC-2003 (TIEMBLIRE1. 25, Last sequence update) DE Presenilin 1 CARCHOSONICAL (Chicken). COMENCARYOCLA; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; OC Gallus gallus (Chicken). COMENCARYOCLA; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; OC Gallus gallus (Chicken). COMENCARYOCLA; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; OC Gallus. COMENCARYOCLA; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; OC Gallus. COMENCARYOCLA; Comencary (Comencary); ON NCBITAXID=9031; RN SEQUENCE FROM N.A. RC STRAIN=ELT; TISSUB-Brain; RN COMENCARYOCLA; Comencary (Comencary); RN							 													
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MEDLINE=98337349; PubMed=9674592;
Archer S. Hirano J. Diss J.K.J., Fra

"Expression and localization in the fi
"Expression and localization in the fi
Alzheimer's related PS1 gene.";
Neuroreport 9:2049-2056(1998).

EMBL; Y17128; CAA76641.1; -.

MEROPS; A22.001; --
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NCBI_TaxID=7962;
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InterPro; IPR006639; Peptidase_A22.
InterPro; IPR001018; Peptidase_A22A.
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       VPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTEDTETVGQRALHSILNAAIMISVIVVM
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Gene 279:157-164(2001).

EMBL; AF369891; AAL40416.1; JOINED.
EMBL; AF369890; AAL40416.1; JOINED.
CO; GO:00016020; C:membrane; IEA.
CO; GO:0003700; F:transcription factor
GO; GO:0003702; F:ntracellular signal.
GO; GO:000355; P:regulation of transc:
InterPro; IPR000847; HTH_LYSR.
InterPro; IPR000843; Peptidase A22.
InterPro; IPR000108; Peptidase A22.
InterPro; IPR001108; Peptidase A22.
PAGNITS; PR01072; PRESENILIN;
SMART; SM00730; PSN; 1.
PROSITE; FS00044; HTH_LYSR_FAMILY; 1.
PROSITE; FS00044; HTH_LYSR_FAMILY; 1.
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SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE=21590369; PubMed=11733140;
MEDLINE=21590369; PubMed=11733140;
Martinez-Mir A., Canestro C., Gonzalez-Duarte R., Albalat R.;
Martinez-Mir A., Canestro C., Gonzalez-Duarte R., Albalat R.;
"Characterization of the amphioxus presentlin gene in a high gene-
"Characterization of the amphioxus presentlin during the vertebrate
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IWNFGVVGMICIHWKGPLRLQQAYLIMISALMALVFIKYLPEWTAWLILAAISVYDLLAV
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                                RSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSRQVVEQDEEEDEELTLKYGAKHVIMLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                     504 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             floridae (Florio
tazoa; Chordata;
                                                                                                                                                     TH_LYSR_FAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -ENDDGGFSEEWEAORDSHLGPHRSTPESRAAVOELSSSILAG-
                                                                                             58.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Florida lancelet) (Amphioxus)
ordata; Cephalochordata; Branch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20,
20,
                                                                          56;
                                                                                                                                                     FAMILY; 1.
W; 9C3794D0302859B4
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Last
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                                                                        Score 1368; Di
Pred. No. 2.2e
36; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                     factor activity;
signaling cascade
transcription, DN
-DGGEDHGIRHR--EDEEEEDTEMTLKYGAKHVIMLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence update)
annotation update)
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                                                                          DB 5;
.2e-105;
.eg 101;
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                                                                                                                                                                                                                                                                                                       cascade; IEA.
tion, DNA-dependent;
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                                                                                                                                                            CRC64;
                                                                                                               Length
                                                                               Indels
                                                                                                                     504;
                                                                                 36;
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                                                                                 Gaps
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RESULT
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Best Local S
Matches 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Korade Mirnics Z., Keryanov S., Lovelock J., Corn "Cloning of chicken presenilins.";
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ dat EMBL; AY043493; AAK95409.1;
GO; GO:0016020; C:membrane; IEA.
GO; GO:0007242; P:intracellular signaling cascade InterPro; IPR001639; Peptidase A22.
InterPro; IPR001683; Peptidase A22.
InterPro; IPR00108; Peptidase A22A.
Pfam; PF01080; Presenilin; 1.
PRINTS; PR01072; PRESENIIIN.
SMART; SM00730; PRESENIIIN.
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01-DEC-2001
01-OCT-2003
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Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q90X07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q90X07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.
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     167
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                                                                                                                                                                                                                                                                                                                                                                  283;
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                                                                                                                                                                                                                                                                                                                                                                                           Similarity
IISSLLLLFFFSFIYLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYL
                                                                                        TRKDGQLIYTPFTEDTETVGQRALHSILNAAIMISVIVWMTILLVVLYKYRCYKVIHAWL
                                                                                                                                                        NNVADEDASDSDVRVRESALENEEEELTLKYGAKHVIMLFVPVTLCMIVVVATIKSVRFY
                                                                                                                                                                                                                                                                                                           ELPAPLSYFQNAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LTLLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI
                                                    TEKNIGQLIYTPFSEDTPSVGQRLLNSVLNTIMISVIVVMTVFLVVLYKYRCYKFIHGWL
                                                                                                                                                                                                                                                              ESPPVPSYQDGLQASE-----GSSRSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GNQQQQQQMEEDEBERGVKLGLGDFIFYSVLVGKAS--SNGDWNTTLACFVAILIGLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLRMLVETAQERNETLFPALIYSSTMVWLVNMAEGDPEAQRRVSKNSKHNAESTERES---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AVGMVCIHWKGPLLLQQAYLIVISALMALVFIKYLPDWTTWFILGAISLYDLVAVLCPKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VVGMISIHWKGPLRLQQAYLIMISALMALVFIKYLPEWTAWLILAVISVYDLVAVLCLKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TVFLVILYKYRCYKFIHGWLILSSLMLLFLFAYIYLGEVLQAYNIPCDYITLAIVMWNFG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LTLLLAIFKKALPALPISITFGLIFNFATANLVTPFTDALASQQVYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAGAVGGEEEGGFGPDWNESRGFQPTRRPNRGGNASDASVNSEDARQAAQNLSNGRLSPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLKVLVETAQERNEPIFPALIYSSTMMWFVGMADSDPEAKKKKKKKKKKKRADGDPQAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -QDTVAENDDGGFSEEWEAQR--DSHLGPHR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451 AA;
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                                                                                                                                                                                                                                                                                                                                                                     Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Euteleostomi;
Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50496 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -GEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLC
                                                                                                                                                                                                                                                                                                                                                                                           56.98;
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. 19, Last sequence 25, Last annotation
                                                                                                                                                                                                                                                                                                                                                                     43;
                                                                                                                                                                                                                                                                                                                                                               Score 1361.5;
Pred. No. 6.6e
13; Mismatches
                                                                                                                                                                                            EEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         534E6364C627E8B0 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                 DB 13; Length
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Best Local
                                                                                                                                                                                                                                                                                                                                                                  Matches
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EMBL; AP36999; AAL40414.1; JOINED.
GO; GO:0016020; C:membrane; IEA.
GO; GO:001700; F:transcription factor activity; IE;
GO; GO:0007742; P:intracellular signaling cascade;
GO; GO:0007342; P:intracellular signaling cascade;
GO; GO:0006355; P:regulation of transcription, DNA-
InterPro; IPR006639; Peptidase_A22.
InterPro; IPR006639; Peptidase_A22A.
InterPro; IPR001108; Peptidase_A22A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAR-2002
01-MAR-2002
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pram; pro1080; Presentlin; 1.
Prints; PR01072; PRESENILIN.
SMART; SM00730; PSU; 1.
PROSITE; PS00044; HTH LYSR FAMILY;
SEQUENCE 525 AA; 57598 MW; 2814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.

MEDLINE=21.590369; PubMed=11733140;

Martinez-Mir A., Canestro C., Gonza

"Characterization of the amphioxus

density genomic region illustrates

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Branchiostoma
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Eukaryota; Metazoa; Chordata;
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VVGMISIHWKGPLRLQQAYLIMISALMALVFIKYLPEWTAWLILAVISVYDLVAVLCLKG
                                                                                   TILLVVLYKYRCYKVIHAWLIISSLLLLFFFSFIYLGEVFKTYNVAVDYITVALLIWNFG
                                                                                                                                                     APVSLCMAVVVATISSITEYTEKNGYLIYTPFHEEGASTASKVGDSLANGAIMVGVILVM
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ordata; Cephalochordata; Branchiostomidae;
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Last annotation updat
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                                                                                                                                                                                                                                                                                                                                                                                        Score 1360.5; DB 5; Length Pred. No. 9.6e-105;
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ioxus presenilin gene in a high gene-
rates duplication during the vertebrate
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                                                                                                                                                                                                                                                                                                                                                                  Mismatches
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01-MAR-2001
01-OCT-2003
Presenilin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PRO1072; PRESENILIN.
SMART; SM00730; PSN; 1.
SEQUENCE 582 AA; 63782 MW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (OCT-1999) to the EMBL/GenBank/I
EMBL; AF197881; AAG28518.1; -.
GO; GO:001.6020; C:membrane; IEA.
GO; GO:007242; P:intracellular signaling
InterPro; IPR001639; Peptidase A22.
InterPro; IPR001618; Peptidase A22.
Pfam; PF01080; Presenilin; 1.
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Rogaev E.I., Riaza
Tyrsin O.;
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Sigmurethra; Helicoidea; Helicidae; Helix.
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Pred. No. 1.1e-94;
3; Mismatches 108; Indels 107;
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Submitted (JUL-2002) to the EMBL/GenBank/DDB Submitted (JUL-2002) to the EMBL/GenBank/DDB EMBL; AX114851; AAN08498.1; -
GO; GO:0016020; C:membrane; IEA.
GO; GO:0007242; P:intracellular signaling ca Interpro; IPR006639; Peptidase_A22.
Interpro; IPR006639; Peptidase_A22.
Interpro; IPR001108; Peptidase_A22.
Interpro; IPR001108; Peptidase_A22A.
Pfam; PF01080; Presentilin; 1.
SMART; SM00730; PSN; 1.
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Q8HZ66;
Q9HZ66;
Q1-MAR-2003 (TrEMBLrel. 23, Created)
Q1-MAR-2003 (TrEMBLrel. 23, Last sequence update)
Q1-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Presenilin-1 (Fragment)
Presenilin-1 (Fragment)
Oryctolagus cuniculus (Rabbit)
Oryctolagus cuniculus (Rabbit)
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
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Al-Khedhairy A.A., Arfin M., Al-Dukhyil A.B.,
"Molecular cloning and sequencing of the rabbit presentlin-1"
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                                                                                                                                                                                                 LMALVFIKYLPEW
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133 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15398 MW;
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Pred. No. 2.1e-48;
2; Mismatches 0
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cascade;

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Gaps

120

60

Length 133; Indels

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Minimum DB
Maximum DB
                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
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Perfect score:
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seq length: 2000000000
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Gapop 10.0 , Gapext 0.5
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2391
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                                                                                                                                           A_Geneseq_29Jan04:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd
                                                                  geneseqp1980s:*
geneseqp1990s:*
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geneseqp2001s:*
geneseqp2002s:*
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geneseqp2003bs:*
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(without alignments)
2199.161 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	œ	7	თ	ហ	4.	ω	2	₽	Result No.	
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Aaw0	Aaw05746	Aae05563	Aaw27177	Aaw05736	Aaw05747	Aaw05749	Aaw05	Aaw05	Aaw05	Aaw05737	Aao1804	Aau7941	Aae1	Aae05466	Aag639	Aae1079	Aab0797	Aay238	Aay2441	Aaw23	Aaw414	Aaw0573	Aaw2	0	Desc	
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AAE17047	AAW11839	AAY51393	AAE17046	AAW05750	AAW05759	AAE17045	AAW05745	AAW05743	AAW05752	AAE05564	AAW56770	AAW05744	AAW05757	AAW05742	AAW05740	AAW05753	AAW05741	AAW05739	OF / COMPT
Aae17047	Aaw11839	Aay51393	Aae17046	Aaw05750	Aaw05759	Aae17045	Aaw05745	Aaw05743	Aaw05752	Aae05564	Aaw56770	Aaw05744	Aaw05757	Aaw05742	Aaw05740	Aaw05753	Aaw05741	Aaw05739	Hawus/to
' Human mut	Human ear	Human S18	Human mut	Presenili	Presenili		Presenili	Presenili) Homo sapi	Presenili	' Presenili	Presenili) Presenil	Presenil	. Presenil	Presenil	PI CECTIFIE

ALIGNMENTS

25-MAR-2003 23-JUL-1997 AAW05751;

(revised)
(first entry)

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AAW05751 standard; protein; 467

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RESULT 1
ADMOS751
ID AAMO
XX AAMO
AC AAMO
AC AAMO
DT 25-N
DT 23--
XX Pres
XW Pres
XW Pres
XW Gept
XW Gept
XX Home
XX Cla
XX Gen
PT Of
XX Gen
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28-JUN-1995;
31-JUL-1995;
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(UTOR ) UNIV TORONTO GOVERNING COUNCIL.
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95US-00496841.
95US-00509359.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fraser PE,
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AAM05736-W05760 represent mutated versions of the human presenilin-1-1 protein (see AAW05733 for wild type sequence). AAW05734 represents a different wild type form of presenilin-1 that results from alternate splicing of the genomic DNA sequence. The presenilins are a family of highly conserved integral membrane proteins with a common structural

New presenilin genes - useful for diagnosis, therapy and drug screening of familial Alzheimer's disease, cerebral disorders, etc.

Claim 3; Page; 178pp; English.

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RESULT 2
AAW27176
ID AAW2
XX AAW2
AC AAW2
AC Huma
XX Homca
CS Homc
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XX
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Matches 466
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     31-AUG-1995;
                                                      03-SEP-1996;
                                                                                                             06-MAR-1997.
                                                                                                                                                             WO9708319-A1
                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                     Mutant; antisense;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         467
                                                                                                                                                                                                                                                                                                                         product related to Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 2385; D
Pred. No. 2.7e
1; Mismatches
                                                                                                                                                                                                                                                                     vaccine;
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                                                                                                                                                                                                                                                                     Alzheimer's
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence represents the human $182 gene, PS1 locus, product. CC Mutant PS1 produces a gene product that increases the probability of Alzheimer's disease. A nucleic acid sequence able to hybridise to sequences coding for a mutant PS1 polypeptide can be used as probes for diagnosing an increased likelihood of contracting Alzheimer's disease. Antibodies against the mutant polypeptide can also be used for this purpose. Vectors containing or expressing a nucleic acid molecule, purpose. Vectors containing or expressing a nucleic acid molecule to a protein or antibody specific for mutant PS1 can be administered to a patient to reduce the likelihood, or delay the onset, of Alzheimer's disease, e.g. anti-sense RNA expression can be used to decrease expression of the PS1 peptide. Transgenic animals expressing the CC Alzheimer's disease protein can be used to test candidate therapeutics and to investigate the normal role of PS1. The PS1 peptide may also be concluded in pharmaceutical compositions (vaccines) for Alzheimer's be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chromosome 14 early-onset familial Alzheimer's disease gene PS1 useful for diagnosing likelihood of developing. Alzheimer's disea anti-sense sequences, antibodies and vaccines to delay onset.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAT85332.
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                                                                                                                                                                                                                                        LPEWTAWLILAVISVYDLVAVLCLKGPLRMLVETAQERNETLFPALIYSSTMVWLVNMAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  467
                                                                                                                                           GDPEAQRRVSKNSKHNAESTERESODTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
                                                                                                                                                                     GDPEAQRRVSKNSKHNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
                                                                                                                                                                                                                                                                                                                     YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGFLRLQQAYLIMISALMALVFIKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MTELPAPLSYFQNAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR
                                 TLLLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI
                                                                                                    VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
                                                                                                                                                                                                                                                                                                                                                                    DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFSFI
                                                                                                                                                                                                                                                                                                                                                                                            DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLLFFFSFI
                                                                                                                                                                                                                                                                                                                                                                                                                                             QVVEQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QVVEQDEBEDBELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MTELPAPLSYFQNAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR
                                                                      VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
                                                                                                                                                                                                                                                                                           YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 2384; DB 2;
Pred. No. 3.4e-234;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
467
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RESULT 3
AAW05733
ID AAW0

AAW05733

standard;

protein;

AAW05733;

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AAW05733 and AAW05734 represent the two different forms of wild type thuman presentlin-1 (PS-1). The form represented by AAW05734 results from alternate splicing of the genomic DNA sequence. AAW05762 represents the coding sequence for wild type human PS-2. The presentlins are a family of highly conserved integral membrane proteins with a common structural contif, common alternate splicing patterns, and common mutational hot spot regions. Mutations in PS genes are implicated in familial Alzheimer's cd disease (AD) and possibly other diseases such as cerebral haemorrhage, cschizophrenia, depression etc., so detection of mutations in the DNA cencoding these sequences can be used for diagnosis of these diseases. CC These proteins, or vectors that express them or containing antisease csequences, antibodies selective for mutant forms of these proteins (such as AAW05736) and modulators of PS gene expression are potentially useful cor treatment of AD etc. Transgenic animals are useful as models for drug screening. The antibodies can also be used e.g. for affinity purification or containing antiseases. (Dispatch of the containing antisease) and modulators of PS gene expression are potentially useful cor treatment of AD etc. Transgenic animals are useful as models for drug screening. The antibodies can also be used e.g. for affinity purification and in immunoassays. (Updated on 25-MAR-2003 to correct PI field.)
                                                                                                                                                                                                                                                                              Query Match
Best Local 9
                                                                                                                                                                                                                                                            Matches, 465;
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28-JUN-1995;
31-JUL-1995;
                                                                                                                                                                                                                                                                                                                                       Sequence 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New presenilin genes - useful of familial Alzheimer's diseas
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-APR-1996;
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23-JUL-1997
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                                                                                                                                                                                                                                                                                Similarity
                                                      DTETVGQEALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFEFSFI
                                                                                                         QVVEQDEBEDEELTLXYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE
YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY
                                                                                                                                 QVVEQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTE
                                     DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFSFI
                                                                                                                                                                                  MTELPAPLSYFQNAQMSEDNHLSNTVRSQNDNRERQEHNDRRSLGHPEPLSNGRPQGNSR
                                                                                                                                                                                                                     MTELPAPLSYFONAOMSEDNHLSNTVRSONDNRERQEHNDRRSLGHPEPLSNGRPOGNSR
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                                                                                                                                                                                                                                                            Conservative
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                                                                                                                                                                                                                                                        Score 2378; DB 2;
Pred. No. 1.4e-233;
1; Mismatches 1;
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В Ś B Š 맔 Ş

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RESULT 4
ANW41430
ID ANW4
AC A
This sequence is the PS1/467 presentlin peptide. This sequence is conspectifically stated as not being in the nucleic acid of the invention, conspectifically stated as not being in the nucleic acid of the invention, conspectively stated as not being in the nucleic acid of the invention, conspectively stated as not being in the nucleic acid of the invention, constant and the product of the PS1/429 (II) and constant product of the PS1 gene, mutations in constant product of the PS1 gene, mutations in constant probes for detection and quantification of pS1/429, consider a probes for detection and quantification of pS1/429, constitutarly for diagnosis of AD, especially the target sequences that comparison with probes are isolated for sequencing. Antibodies (Ab) can also be diagnosed at the protein level using Ab as immunoassay reagents. Constant probes are isolated for sequencing and both purification of peptides. Antisense nucleic acid may also be used to regulate expression of the pS1/429 gene, and both nucleic acids and peptides are useful as size markers in electrophoresis, chromatography etc. The transgenic animals are used as models for AD, e.g. for testing drugs. Regulators of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   片
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA encoding presentlin diagnosis and treatment
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N-PSDB; AAV17358.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Davis JN,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide PS1/429 and its analogues - useful for
of Alzheimer's disease.
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Best Local
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                                                                                                                                                      Presenilin-1; PS1 gene; human; familial Alzheimer's disease; cerebral haemorrhage; schizophrenia; depression; epilepsy; mental retardation; diagnosis; therapy; transgenic animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 467 AA;
 Misc-difference
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/note= "Val82Leu mutation site" 96 .
                    /note= "transmembrane domain 1"
82
                                                                       alternative
79
                                                                                                     Location/Qualifiers 26. .29
                                                                                /note= "residue 26-29 deletion, alternative splicing"
                                                             note= "Ala79Xaa mutation
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Pred. No. 1.4e-233;
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                                                                                    258. .290
258. .290
/note= "residue /
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/note= "hydrophilic
163
                                                                      Asp257Ala mutation 260
                                                                                                                                   /note= "Ala246Glu
257
                                                                                                                                                                                                                                                                                                                          /note= "Gly209Val
211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "transmembrane
                    /note= "hydrophilic 263
                                                                                                                                                                                                                                                                                                                                                /note= "transmembrane domain 209
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "hydrophilic loop"
                                                                                                               /note= "Asp257Ala mutation site,
258-290 deletion (Claim 1)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label= The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133. .154
           /note= "Cys263Arg mutation
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/label= TI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note=
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                                                                                                                                                                                                                                                                                                                                                                              note= "hydrophilic
195. .212
                                                                                                                                                                                                                                                                                                                                                                                                                                           note= "Leu171Pro mutation site"
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                                                   note= "Ala260Val
63. .407
                                                                                                                                                                   note= "transmembrane domain
                                                                                                                                                                                              label= TM5-6
note= "hydrophilic loop"
                                                                                                                                                                                                                                                                                                                                                                                                                       note= "Phell7Ser
                                                                                                                                                                                                                                                                                                                                                                                                                                                               note= "transmembrane domain 3"
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                                                                                                                                                                                                                                                                                 label= TM4-5
note= "hydrophilic loop"
                                                                                                                                                                                                                                                                                                                note= "Ile211Thr
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      label=
                                                                                                                                                                                                                               note= "Ala231Thr mutation site"
                                                                                                                                                                                                                                                                                                                                                                                                   label=
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                                                                                                                                                                                                                                                                       .238
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                                                                                258-290 deletion ion (Claim 1)"
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           site (Claim 18)"
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This polypeptide comprises human presentlin-1 (hPS1). Its amino acid CC sequence was deduced from an isolated cDNA clone (see AAV04666). Another CP hPS1 sequence (see AAW23965) results from alternative splicing of the CC hPS1 mRNA transcript. A murine PS1 homologue (see AAW23966) and a human presentlin-2 protein (see AAW33967) are also provided. Mutations in the CPS-1 and PS-2 genes are linked to the development in humans of forms of familial Alzheimer's disease (FAD) and may be causative of other CC disorders, e.g. cognitive, intellectual, neurological or physiological CC disorders such as cerebral haemorrhage, schizophrenia, depression, mental CC disorders such as cerebral haemorrhage, schizophrenia, depression, mental CC comprising or derived from the presentilns is made in screening and CC diagnosing FAD, identifying and developing therapeutics for treatment of FAD, and in producing cell lines and transgenic animals useful as models cativity of a presentilin protein, and methods for identifying substances that bind to, or modulate the activity of a presentilin protein, and methods for identifying substances that affect the interaction of a presentilin-interacting protein with a presentilin protein are also disclosed
                                                                                                                                                                                                                                                                                                                                                                                                                                 05-JUL-1996;
12-JUL-1996;
08-NOV-1996;
02-JAN-1997;
                                                                                                                                                                                                                                                    Claim 1; Page 180-182;
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                                                                                                                 Mutant presenilin-1 gene-introduced animals, study of Alzheimer's diseases in human and so prevention and/or treatment of the diseases.
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Query Match
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                                                                                    Human; presenilin 1; PS1; presenilin-binding protein; presenilin allele; Alzheimer's disease; senile dement: psychiatric disease; schizophrenia; depression; neuro
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                                                                                                                                         Amino acid sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Identifying substances that alter presentilin interactions, useful for screening individuals for presentilin alleles associated with Alzheimer's disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lateral sclerosis (ALS), multiple sclerosis, rarkinson's disease, amyotrophic with stroke, neural paropathy, motor neuron diseases, sciatic crush, peripheral neuropathy, neuropathy associated with diabetes, spinal cord injuries and facial nerve crush
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                         The invention relates to a method for identifying modulators of presentilin and catenin p120. Modulators of catenin p120 and presentilin are useful for the treatment and prophylaxis of disorders that is responsive to modulation of presentilin/catenin p120 activity. In particular, neuronal disorders such as cognitive disorders and neurodegenerative disorders such as cognitive disorders and neurodegenerative disorders such as cognitive disorders and reserved diseases such as Alzheimer's disease. Catenin p120 DN are useful for identifying mutations in catenin p120 genes. The dispussion of such mutations assist in the dispussion of such mutations assist in the dispussion of a catenin p120 presentility to Alzheimer's or other conditions associated with presentilin and in assessing the physiology of such disorders. Catenin p120 DNAs are also used in hybridisation studies to monitor expression p120 genes and in particular for up or down regulation of catenin p120 expression. The present sequence is human presentilin-1 (PS-1) protein
Sequence 467
                                                                                                                                                                                                                                                                                                              Identifying presentlin or catenin p120 activity modulator useful modulating presentlin-catenin p120 interaction and thus for treat cognitive disorder e.g., Alzheimer's disease comprises enhancing
                                                                                                                                                                                                                                                                 Example 1;
                                                                                                                                                                                                                                                                                                  cognitive function
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The present sequence represents human presentlin 1. KIAA0253 binds to presentlin. The specification describes a method of identifying a modulator of presentlin function or KIAA0253 function. The method comprises determining presentlin activity or KIAA0253 activity in the presence and absence of a test compound, where presentlin activity is determined by its ability to bind to KIAA0253. A modulator of presentlin or KIAA0253 polypeptide is useful in the manufacture of a medicament for
                                                                                                                                                                                                                                                        Identifying a modulator of of presention to bind to a absence of a test compound, Alzheimer's disease.
                                                                                                                                                                                                       Disclosure;
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RESULT 11
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Best Local Sim
Matches 465;
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                                                                           10-JAN-2000;
04-JAN-2001;
                                                                                                                                                      08-JAN-2001;
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The invention relates to human Par-4 protein, presentlin protein (PS1 and CC PS2) and their corresponding DNA molecules. The invention also relates to CC a method for identifying inhibitors of neuronal degeneration, comprising CC cotransfecting eukaryotic host cells expressing presentlin (PS), with a CC Par-4 DNA, and an NF-kappa B dependent reporter construct, exposing the CC cotransfected cells to a candidate molecule and monitoring the ability of CC the candidate molecule to induce NF-kappa B activation. Presentlin CC proteins participates in nuclear factor kappa B activation are useful for CC cotransfer period of the candidate molecule and degeneration are useful for CC cotransfer disease, epilepsy, multiple sclerosis funting the corresponding cotransfer neuropathies, motorneuron disorders such as myotrophic CC lateral sclerosis (ALS), Bell's palsy and various conditions involving CC spinal muscular atrophy and paralysis. The present sequence is human CC presentlin (PS1) protein
RESULT 12
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                                                                                                                  TLLLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI
                                                                                                                                                 TLLLLAIFKKALPALPISITEGLVEYFATDYLVQPFMDQLAFHQFYI 467
                                                                                                                                                                                                                     VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
                                                                                                                                                                                                                                                        GDPEAQRRVSKNSKYNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
                                                                                                                                                                                                                                                                            GDPEAQRRVSKNSKHNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
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                                                                                                                                                                                      VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
                                                                                                                                                                                                                                                                                                                                                                                           YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY
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Pred. No. 1.4e-233;
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                                                                                                                                                                                                                                                                                                                                              CC The invention relates to mutant presenilin 1 (PS1) and presenilin 2 (PS2)
CC polypeptides. Presenilin are involved in the processing of amyloid
CC precursor protein (APP) from which major amylodogenic peptides are
CC cleaved. Mutant presenilins are useful for identifying agents that
CC modulate amyloid beta-peptide (Abeta) derived peptide production. Mutant
CC presenilin is also useful as a target for screening drugs useful in the
CC treatment of pathologies associated with aberrant amyloid precursor
CC protein processing, such as Alzheimer's disease, Parkinson's disease,
CC multiple sclerosis, Huntington's disease, amylotrophic lateral sclerosis,
CC degeneration, stroke, ischaemic injury and schizophrenia. A transgenic
CC con-human animal is useful for analysing the interaction between APP and
CC mutant presenilin-processing protease in vivo, and for screening anti-
CC Alzheimer's disease drugs in vivo. A transgenic non-human animal is
CC useful for analysing the interaction between APP and mutant presenilin-
CC processing protease in vivo, and for screening anti-
CC drugs in vivo. The present sequence is human PSI wild type protein
                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 465
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                                                                                                                                                                                                                                                                                                                                            Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel isolated mutant presentilin 1 and presentilin 2 polypeptides, for screening of drugs for treating pathologies associated with at amyloid precursor protein processing, such as Alzheimer's disease.
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                           YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY
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                                                                                                                                                            QVVEQDEEEDEELTLKYGAKHVIMLFVPVTLCMVVVVAIIKSVSFYTRKDGQLIYTPFTE
   YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY
                                                                  DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFSFI
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                                                                                                                                                                                                                                                                                       Score 2378; DB 5;
Pred. No. 1.4e-233;
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RESULT 13
AAU79416
The invention relates to identifying an agent modulating interaction between integrin-linked kinase (IIK) and presentiln-1 (PS1) comprising CC providing IIK, PS1 or their functional variants, as first and second components respectively, contacting the components in the presence of a test agent under conditions that in absence of the agent, would permit CC the components to interaction between the components that is capable of modulating the interaction between the components. Also included are the method above where the components are protein kinase beta (PKB), CC gamma secretase or their functional variants, test kits for carrying out CC gamma secretase or that modulates interaction between IIK and PS1. CC or PKB or gamma-secretase. The agent has therapeutic applications in CC or PKB or gamma-secretase. The agent has therapeutic applications in CC condition associated with an interaction between IIK and PS1. CC PKB, activity of gamma-secretase, apoptosis, cancer and Alzheimer's CC disease. The agent is also useful for manufacturing a medicament for use in treatment of the above mentioned conditions. The present sequence or represents human presentiin-1, PS-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; integrin-linked kinase; ILK; presenilin-1; protein kinase B; PKB; gamma secretase; apoptosis; Alzheimer's disease; PS-1; nootropic; neuroprotective; cytostatic; cancer.
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                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 43-45; 53pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                    Identifying agent that modulates interaction between integrin-linked kinase and presenilin-1, useful for treating Aizheimer's disease, and identifying agent that modulates protein kinase B or gamma secretase
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RESULT 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                           Sel-12; presenilin; neuronal di
amyloid precursor protein; APP
                                                                                                                                                                                                                                                                                                    02-SEP-2002
Isolated DNA molecule comprising promoter of the sel-12 gene Caenorhabditis elegans operably linked to heterologous gene, expression in neural cells and is useful to develop drugs to neuronal disorders.
                                                                                                                                                       04-APR-1997;
                                                                                                                                                                                                                                                                               Presenilin
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                                                       WPI; 2002-478281/51.
N-PSDB; AAL47323.
                                                                                        Baumeister
                                                                                                                                  04-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                standard;
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Pred. No. 1.4e
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Best Local S
Matches 465
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 467
                                                                                                                                     depression;
                 WO9634099-A2
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23-JUL-1997
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                                                           Key
Modified-site
                                                                                                                                                  Presenilin-1; human; hPS1-1; hPS1-2; PS-2; integral membrane protein; familial Alzheimer's disease; cerebral haemorrhage; schizophrenia;
                                                                                                                                                                                             Presenilin-1-1 V82L mutation
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/label= V82L
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                                                                                                                                   expression modulator; therapy; mutein
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Pred. No. 1.4e-233;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28-APR-1995;
28-JUN-1995;
31-JUL-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW05736-W05760 represent mutated versions of the human presenilin-1-1 protein (see AAW05733 for wild type sequence). AAW05734 represents a different wild type form of presenilin-1 that results from alternate splicing of the genomic DNA sequence. The presenilins are a family of highly conserved integral membrane proteins with a common structural
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 467 AA;
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familial Alzheimer's disease, cerebral disorders,
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                              VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
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      VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
                                                                    GDPEAQRRVSKNSKYNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
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Pred. No. 2.8e-233;
2; Mismatches 1;
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Perfect score:
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seq length: 2000000000
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1 MTELPAPLSYFQNAQMSEDN.....ATDYLVQPFMDQLAFHQFYI 467
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Published Applications
L: /cgn2_6/ptodata/1/pu
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Listing first 45
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US-10-071-90-1

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ALIGNMENTS

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IS-09-785-474-30
IS-09-785-474-30
IS-09-785-474-30
IS-09-785-474
Patent NO. US2001012626A1
INFORMATION: Genetic Alterations Related To Familial TITLE OF INVENTION: Genetic Alterations Related To Familial INFORMATION: Genetic Alteration & FOX P.L.C.
STREET: 1100 NEW YORK AVENUE, SUITE 600
CITY: WASSHINGTON
STATE: DC
COUNTRY: USA
INFORMATION SUITE 600
CITY: WASSHINGTON
INFORMATION: SUITE 600
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Plopy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: 20-Feb-2001
CLASSIFICATION NUMBER: US/09/785,474
FILING DATE: 20-Feb-2001
CLASSIFICATION NUMBER: US/09/785,474
FILING DATE: 30-AUG-1995
APPLICATION NUMBER: 08/706,344
FILING DATE: 31-AUG-1995
APPLICATION NUMBER: 08/706,344
FILING DATE: 31-AUG-1995
APPLICATION NUMBER: 08/706,344
FILING DATE: 31-AUG-1995
ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 00/003,054
FILING DATE: 31-AUG-1995
ATTORNEY/AGENT INFORMATION:
TELEPHONE: 202-371-6800
TELEPAX: 202-371-6800

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TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO:
US-09-785-474-30
                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
US-09-785-474-2
; Sequence 2, Application US/09785474
; Patent No. US20010012626A1
; GENERAL INFORMATION:
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Best Local Similarity
Matches 467; Conserv
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COMPUTER REALABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1

CURRENT APPLICATION DATA:

APPLICATION UNMBER: US/99/785,474

FILING DATE: 20-Feb-2001

CLASSIFICATION: <UNKnown>

PRIOR APPLICATION DATA:
                                                                                                                                                                                               NUMBER OF SEQUENCES: 32

CORRESPONDENCE ADDRESS:
ADDRESSE: STERNE, KESSLER, GOLDSTEIN &
STREET: 1100 NEW YORK AVENUE, SUITE 600
CITY: WASHINGTON
STATE: DC
STATE: DC
                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Genetic Alterations Alzheimer's Disease
                                                                                                                                                                                                                                                                                                                                    APPLICANT: TANZI, RUDOLPH
WASCO, WILMA
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US-09-785-474-32
Sequence 32, Application US/09785474
Patent No. US20010012626A1
GENERAL INFORMATION:
APPLICANT: TANZI, RUDDLPH
MASCO, WILMA
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                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN
STREET: 1100 NEW YORK AVENUE, SUITE 60
                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                        TITLE OF INVENTION: Genetic Alterations Alzheimer's Disease
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                       CITY: WASHINGTON STATE: DC
          COUNTRY: USA
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Query Match
Best Local Similarity
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INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 08/706,344
FILING DATE: 30-AUG-1996
APPLICATION NUMBER: 60/03,054
FILING DATE: 31-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: KIM, JUDITH U.
REGISTRATION NUMBER: 40,679
REGISTRATION NUMBER: 0609.411
TELEPONNUICATION INFORMATION:
TELEPONE: 22-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID
                                                                                                                                                                                                                                                                                                                                                  181 YLGEVEKTYNVAVDYITVALLIWNEGVVGMISIHWKGPLRLQQAYLIMISALMALVEIKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 DTETVGORALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAMLIISSLLLLFFESFI
                                                                                                                   361 VQELSSSIIAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
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TLLLAIFKKALPALPISITEGLVFYFATDYLVQPFMDQLAFHQFYI
                                                                                                                                                                                                          GDPEAQRRVSKNSKHNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
                            TLLLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI 467
                                                                                      VOELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
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milarity 99.8%;
Conservative
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Pred. No. 6.2e-206;
0; Mismatches 1;
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Related

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TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO:
US-09-785-474-32
RESULT 4
US-09-754-949-4
; Sequence 4, Application US/09754949
; Patent No. US20020015939A1
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Best Local S
Matches 465
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APPLICATION NUMBER: 08/706,344
FILING DATE: 30-AUG-1996
APPLICATION NUMBER: 60/003,054
FILING DATE: 31-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: KIM, JUDITH U.

REGISTRATION NUMBER: 40,679
REFERENCE/DOCKET NUMBER: 0609.4180002
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-2600
TELEPHONE: 202-371-2600
INFORMATION FOR SEQ ID NO: 32:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
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99.5%;
Local Similarity
99.6%;
nes 465; Conservative (
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTMARE: PATENTIN Release #1.0,
CURRENT APPLICATION DATA:
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FILING DATE: 20-Feb-2001
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                 GDPEAQRRVSKNSKHNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
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Pred. No. 1.7e-205;
0; Mismatches 2;
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CURRENT APPLICATION NUMBER: US/09/878,454A
CURRENT FILING DATE: 2001-06-11
PRIOR APPLICATION NUMBER: 60/210,939
PRIOR FILING DATE: 2000-06-11
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin version 3.1
SEQ ID NO 3
LENGTH: 467
TYPE: PRT
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US-09-878-454A-3
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US-09-878-454A-3
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                                                                                                                                                                                      Sequence 3, Application US/09878454A Patent No. US20020064828A1 GENERAL INFORMATION:
APPLICANT: Monteiro, et al.
TITLE OF INVENTION: Method of Cont.
FILE REFERENCE: 4115-161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: METHODS FOR IDENTIFYING
TITLE OF INVENTION: NEURONAL DEGENERATION
FILE REFERENCE: SCIOS.012A
CURRENT APPLICATION NUMBER: US/09/754,949
CURRENT FILING DATE: 2001-01-04
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 4
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Best Local :
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              TYPE: PRT
ORGANISM: Homo
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TYPE: PRT
ORGANISM: Homo Sapien
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Pred. No. 2.2e-205;
1; Mismatches 1;
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GENERAL INFORMATION

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; AAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. US20020082211A1
US-09-895-035-14
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Best Local S
Matches 465
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Patent No. US20020082211A1
GEMERAL INFORMATION:
APPLICANT: Patterson, Chandra
APPLICANT: Murry, Lynn B.
APPLICANT: Kaser, Matthew R.
TITLE OF INVENTION: HUMAN PRESENILIN VARIANT
FILE REFERENCE: PC-0047 CIP
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Matches 4
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CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: 09/116,640
PRIOR FILING DATE: 1998-07-16
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PERL Program
SEQ ID NO 14
                                                                                                                                                                                                                                                                                                                LENGTH: 46
TYPE: PRT
                                                                                                                                                                                                                                                                                              ORGANISM: Homo sapiens
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Pred. No. 2.2e:
1; Mismatches
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1; Mismatches 1;
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; TYPE: PRT
; ORGANISM: Homo Sapien
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APPLICANT: Fraser, Paul E.
TITLE OF INVENTION: Alzheimer's Related Prot
TITLE OF INVENTION: Of Use
TITLE REFERENCE: 1034/1F810-US1
CURRENT APPLICATION NUMBER: US/10/071,900
CURRENT FILING DATE: 2002-02-08
PRIOR HELING DATE: 1999-01-08
PRIOR APPLICATION NUMBER: US/09/227,725
PRIOR TILING DATE: 1999-01-08
PRIOR FILING DATE: 1999-01-08
NUMBER OF SEQ ID NOS: 4
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Best Local
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Similarity 99.6%;
65; Conservative
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Pred. No. 2.2e-205;
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Matches 465;
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Publication No. US20030113811A1
GEMERAL INFORMATION:
APPLICANT: GLAXO GROUP LIMITED
TITLE OF INVENTION: ASSAY
FILE REFERENCE: PG3950USW
CUGRENT APPLICATION NUMBER: US/10/221,254
CURRENT FILING DATE: 2002-09-10
CURRENT FILING DATE: 2002-09-10
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PRIOR FILING DATE: 2000-03-10
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 4
Sequence 3, Application US/10180781 Publication No. US20030180880A1
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TYPE: PRT
ORGANISM: Homo sapiens
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MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Betentin Release #1.0, Version #1.

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/180,781
FILLING DATE: 24-Oun-2002
CLASSIFICATION: <Unknown:
NAME: POCLET NUMBER: 33,332
REGISTRATION NUMBER: 33,332
REGISTRATION NUMBER: 920010.571C2
TELEPHONE: (206) 682-693
INFORMATION: (206) 682-693
INFORMATION SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
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Local Similarity 99.6%;
1es 465; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE DESCRIPTION: SEQ ID NO:
                                      361
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                                                                                                                                                                                                                                               YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY
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TYPE: amino acid
STRANDEDNESS: <Unknown>
                              VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL 420
                                                                         GDPEAQRRVSKNSKYNAESTERESQDTVAENDDGGFSBEWEAQRDSHLGPHRSTPESRAA
                                                                                                      GDPEAORRVSKNSKHNAESTERESODTVAENDDGGFSEEWEAORDSHLGPHRSTPESRAA
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   VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
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Bird, Thomas D.
Galas, David J.
INVENTION: CHROMOSOME 1 GENE AND GENE PRODUCTS RELATED TO
ALZHEIMER'S DISEASE
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Wasco, Wilma
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Pred. No. 2.2e-205;
1; Mismatches 1;
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421

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Sequence 4, Application US/10417422
Publication No. US20030219720A1

GENERAL INFORMATION:
APPLICANT: MCCARTHY, JUSTIN
APPLICANT: CORDELL, BARBARA
APPLICANT: CORDELL, SCIOS, INC.
ITITLE OF INVENTION: METHODS FOR IDENTIFYING INTITITIE OF INVENTION: NEURONAL DEGENERATION
FILLE RETERENCE: SCIOS, 012C1
CURRENT APPLICATION NUMBER: US/10/417,422
CURRENT FILING DATE: 2003-04-14
PRIOR APPLICATION NUMBER: 09/754949
PRIOR FILING DATE: 2001-02-04
PRIOR FILING DATE: 2001-02-04
PRIOR FILING DATE: 2001-02-04
PRIOR FILING DATE: 2001-02-04
PRIOR FILING DATE: 2001-01-10
NUMBER OF SEQ ID NOS: 17
SECTION NOT SEQ ID NOS: 17
SECTION NO
RESULT 11
US-09-785-474-4
; Sequence 4, Application US/09785474
; Patent No. US20010012626A1
; GENERAL INFORMATION:
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TYPE: PRT
ORGANISM: HOMO SAPIEN
10-417-422-4
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Pred. No. 2.2e-205;
1; Mismatches 1;
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FILING DATE: 30-AUG-1996
APPLICATION NUMBER: 60/003,054
FILING DATE: 31-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: KIM, JUDITH U.
REGISTRATION NUMBER: 06.09.41!
REGISTRATION NUMBER: 06.09.41!
TELEPHONE: 202-371-2600
TELEPHONE: 202-371-2540
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
TYPE: amino acid
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Best Local Similarity
Matches 465; Conserv
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ZIP: 20005-3934
ZIP: 20005-3934
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PALENTIN Release #1.0, Ve:
SOFTWARE: PALENTIN RELEASE #1.0, Ve:
APPLICATION NUMBER: US/09/785,474
FILING DATE: 20-Feb-2001
CLASSIFICATION: <UNKNOWN>
PRIOR APPLICATION UNMER: 08/706/344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: protein SEQUENCE DESCRIPTION: SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Genetic Alterations Relations NUMBER OF SEQUENCES: 32
CORRESPONDENCE ADDRESS:
ADDRESSEE: STERME, KESSLER, GOLDSTEIN & STREET: 1100 NEW YORK AVENUE, SUITE 600
CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: TANZI, RUDOLPH
WASCO, WILMA
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                             VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
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                                                                      GDPEAQRRVSKNSKHNÄESTERESQDTVÄENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
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Pred. No. 4.9e-205;
0; Mismatches 2;
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US-09-785-474-28
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Matches
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MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 28:
-09-785-474-28
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                                                                                                                                                                                                                                                                                                                                                              Query Match
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TELEPAX: 202-371-2840
INFORMATION FOR SEQ ID NO: 28:
SEQUENCE CHARACTERISTICS:
LENGTH: 467 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/706,344
FILLING DATE: 30-AUG-1996
APPLICATION NUMBER: 60/003,054
FILLING DATE: 31-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: KIM, JUDITH U.
REGISTRATION NUMBER: 40,679
REFERENCE/DOCKET NUMBER: 0609.41
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                            Local
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC COMPATIBLE
COMPUTER: IBM FC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/785,474
FILING DATE: 20-Feb-2001
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 32
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
KESSLER, GOLDSTEIN &
STREET: 1100 NEW YORK AVENUE, SUITE 600
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Similarity 99.6%;
                                                                                                              DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFSFI 180
                YLGEVFKTYNVAVDYITVALLIMNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY
                                                  YLGEVFKTYNVAVDYITVALLIWNFGVVGMISIHWKGPLRLQQAYLIMISALMALVFIKY 240
                                                                                           DTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLFFFSFI
                                                                                                                                                                     QVVEQDESEDESLTLKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKDGQLIYTPFTS 120
                                                                                                                                                                                             QVVEQDEBEDEELTLKYGAKHVIMLFVPVTLCMVVVVVATIKSVSFYTRKDGQLIYTPFTE 120
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COUNTRY: USA
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Pred. No. 7.5e-205;
0; Mismatches 2;
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                                                                                                                                                                                                                                                                                                                                                            Length 467;
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CURRENT FILING DATE: 2001-06-29;
PRIOR APPLICATION NUMBER: 09/116,640;
PRIOR FILING DATE: 1998-07-16;
NUMBER OF SEQ ID NOS: 14;
SOFTWARE: PERL PROGRAM;
SEPTIARE: PERL PROGRAM;
SEQ ID NO 12;
LENGTH: 463;
TYPE: PRT
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; OTHER INFORMATION: Incyte ID No. US20020082211A1 g1244638
US-09-895-035-12
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US-09-895-035-12
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Best Local
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APPLICANT: Murry, Lynn E.
APPLICANT: Kaser, Matthew R.
TITLE OF INVENTION: HUMAN PRESENILIN VARIANT
FILE REFERENCE: PC-0047 CIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
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                              VQELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
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                                                                       GDPEAQRRVSKNSKYNAESTERESQDTVAENDDGGFSEEWEAQRDSHLGPHRSTPESRAA
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98.7%;
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Pred. No. 1.1e-202;
1; Mismatches 1;
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US-09-878-454A-1
VS-09-878-454A-1
Sequence 1, Application US/09878454A
Patent No. US20020064828A1
GENERAL INFORMATION:
APPLICANT: Monteiro, et al.
TITLE OF INVENTION: Method of Cont:
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US-10-293-000-5
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Best Local Similarity
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LENGTH: 467
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Monteiro, Mervyn J.
APPLICANT: Mah, Alex L.
APPLICANT: Perry, George
APPLICANT: Smith, Mark A.
TITLE OF INVENTION: UBIQUILIN, A PRESENILIN
FILE REFERENCE: 4115-175
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ilarity 94.6%;
Conservative 1
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; Pred. No. 2.6e-195;
12; Mismatches 13;
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FILE REFERENCE: 4115-161
CURRENT APPLICATION NUMBER: US/09/878,45
CURRENT FILING DATE: 2001-06-11
PRIOR APPLICATION NUMBER: 60/210,939
PRIOR FILING DATE: 2000-06-11
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin version 3.1
SEQ ID NO 1
LENGTH: 448
TYPE: PRT
ORGANISM: Homo sapiens
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Matches 304
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LLLLAVFKKALPALPISITFGLIFYFSTDNLVRPFMDTLASHQLYI
              LLLLAIFKKALPALPISITFGLVFYFATDYLVQPFMDQLAFHQFYI 467
                                                                                QELSSSILAGEDPEERGVKLGLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCLT
                                                                                                                                                                                                                                                                                                                         TETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLIISSLLLLEFFFSFIY
                                                             EEL-----EEEEERGVKLGLGDFIFYSVLVGKAAATGSGDWNTTLACFVAILIGLCLT
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ilarity 65.2%;
Conservative 40
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Pred. No. 5e-122;
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Search completed: April 8, 2004, 17:03:53 Job time : 49 secs